TECHNICAL BOOK REVIEW INDEX

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JOHN F. HARRIGAN, *Editor*

Volume 9 **January, 1943** **Number 1**

THE purpose of the Technical Book Review Index is primarily to identify reviews in current scientific, technical, and trade journals; secondarily, when feasible, to quote from these reviews. In the evaluation of scientific and technical books, reviews constitute the best existing source of information. The service of the Technical Book Review Index is thus in the field of evaluation, rather than in competition with existing publications which announce new and forthcoming books, list books by subjects, or supply bibliographic information. Each quotation immediately follows the name of the journal from which it is taken. Obviously, these brief extracts, detached from the context, must not be accepted as conclusive. Except for the correction of obvious errors, the bibliographic information is as given in the reviews. It is, therefore, in many cases incomplete and in some cases probably inaccurate.

Abramson, Harold A., and others. Electrophoresis of proteins and the chemistry of cell surfaces. 341p. c1942. Reinhold, New York, $6.

Drug and cosmetic industry, Nov. 1942, p.563. ½ col.

"[Written] to fit the needs of investigators in diverse fields, such as biology, chemistry, medicine, and physics, who are interested in the subject."

Journal of the Franklin Institute, Nov. 1942, p.517. ⅔ p.

"Proceeding from the simple to the more complex, the book may be divided into two parts. The first comprises the first four chapters. It lays the foundation upon which the rest is built. Chapter I contains an elementary presentation in non-mathematical form of the general principles of electrophoretic migration in liquids, which is followed by a brief historical background of experiments. Then in Chapter III, there are discussed certain methods of most value for the quantitative investigation of dissolved proteins, protein surfaces and cell surfaces; and Chapter IV reviews a restricted number of experiments dealing with the electric mobilities of dissolved proteins and particles coated with protein. This especially prepares the reader to follow the discussion taken up in the beginning of the second part . . . in connection with the theories of electric migration. Chapter VI illustrates the way in which proteins can be used to test the general theories of electrokinetics, conductance, and protein behavior . . . The rest of the book is primarily descriptive —dealing with serum and plasma, reactions of antibodies and antigens, interactions of proteins and mixtures, interactions of proteins at surfaces, enzymes and hormones, latex, surface chemistry of cells, and miscellaneous electrophoretic investigations of biological interest. There is a name and subject index . . . Fills a need of many who are interested in the subject. It most certainly is an aid in the investigation of the surface chemistry of living cells." *R. H. Oppermann.*

Rayon textile monthly, Nov. 1942, p.100. ⅓ col.

"Written primarily from a physiological and biological angle, but the investigation of proteins by the method of electrophoresis has made such rapid advances, that it has drawn the attention of nearly all field workers of biological science. Not only does electrophoresis make possible the isolation of single proteins from complex natural mixtures, but it is also one of the most effective methods for the investigation of the behavior of proteins in solution and at surfaces. Silk and wool . . . receive slight attention . . . Casein and soybean receive only little attention. The book has some value to textile chemists working in protein fiber manufacture and use."

Adams, D. R. Practical aircraft stress analysis. Ed.3. Pitman, London, 8s. 6d. net.

Engineering, Oct. 9, 1942, p.283. ½ col.

"This . . . edition . . . is substantially the same as its predecessors, but for the addition of some information on the strength of glued joints . . . The rest of Mr. Adams' work remains . . . a series of straightforward instructions in the design of typical aircraft structural parts. It is not complete in itself, but makes reference to other publications, principally to *Air Publications* 970 and 1208, as necessary. It is hardly an ideal text-book for students as the absence of basic theory, in almost every case, would encourage an attitude of mere acceptance of the rules and formulæ given; but as a reference book at the elbow of a young designer, who would need guidance in the absence of sufficient experience, it should be very serviceable."

Ahrens, Maurice R., and others. Living chemistry. 528p. 1942. Ginn, Boston, $2.28.

Journal of chemical education, Nov. 1942. p.552. ⅔ col.

"The style and exposition is [sic] certainly not too difficult for the average high-school student, and numerous thought questions have been scattered throughout the sections. Considerably more attention has been given to biological and hygiene problems than is common to most chemistry textbooks. The book is organized under the unit plan, and contains numerous tests and unit exercises. The references at the end of the sections, with one or two exceptions, include books, pamphlets, and periodicals, but include no reference to specific articles in the current journals and magazines . . . A commendable addition to the large array of high-school textbooks now available, and the authors are to be congratulated upon a successful effort that neither reflects nor perpetuates the conventional and traditional patterns of the last *umpteen* years." *Shailer Peterson.*

Albert, Arthur L. Electrical fundamentals of communication. 546p. McGraw, New York, $3.50.

Radio-craft, Dec. 1942, p.191. ⅔ col.

"Designed for the student of communication

and the worker in the communications industry, this text presents the electrical fundamentals upon which his [sic] industry is based, embracing the three divisions of radio, telephony and telegraphy, with their allied branches. The book is well balanced. Illustrations and examples are included from all fields concerned, and the theories and explanations given will withstand rigorous examination. The terminology used and the presentations are simple and direct, suitable for beginner students rather than for engineers. For once a work omits the usual hydraulic and mechanical analogies. The facts are presented in electrical language, which can be learned correctly the first time . . . An excellent text to supplement the studies of students in the various radio schools, or for a foundation text for the home student."

Radio news, Dec. 1942, p.38, 81. ⅛ col.

"This distinctive book deals with electrical fundamentals from the point of view of communications—telegraphy, telephony and radio. Designed for beginning students, the treatment is elementary, yet at the same time maintains a high standard of technical accuracy and provides a sound foundation in the subject. Examples illustrating the electrical fundamentals are given throughout . . . and many of these are numerical solutions, typical problems, and circuits found in communication."

Althouse, Andrew D., & **Turnquist,** C. H. Modern welding practice. 412p. 1942. Goodheart-Willcox, Chicago, $4.

Aeronautical engineering review, Oct. 1942, p.79. ⅜ col.

"An attempt is made to lay a thorough foundation for students in all fundamental welding processes so that an understanding may be had of the new methods and new welding devices that are constantly being developed . . . Has been prepared especially for public schools, with particular emphasis on the proper techniques in welding in order that beginners may become acquainted with correct welding practices. Theory and practice of the two major methods of welding are treated, the oxyacetylene method and the electric arc method, with information on the equipment and supplies for these operations . . . Special forms of welding receive attention, including work with ferrous and nonferrous metals, pipes and tubes, soft and hard soldering and the cutting of metals. Chapters are devoted to the manufacture of metals, studying their properties and identification and heat-treatment, and extensive information is given on the equipment and operation of a welding shop. Review questions [are] at the end of each chapter . . . Concludes with a chapter of technical data, including definitions of terms, symbols and tables, and specifications covering acceptable work. Illustrations have been supplied by numerous manufacturers, showing equipment and methods."

Anderson, B. W. Gem testing for jewelers. 194p. 1942. Heywood & Co., London, $2.

Jewelers' circular-keystone, Nov. 1942, p.87. 1⅛ col.

"There is certainly no greater authority on the practical problems that beset the jeweler than . . . B. W. Anderson . . . A practical approach to the every-day questions that confront the ordinary jeweler. It is a small book, pocket size, and does not attempt to explain all the intricacies of gemological mineralogy . . . At the end of the book is [sic] a brief glossary, an alphabetical summary of the gem species in the familiar pattern, a little bit on crystal systems . . . a short bibliography, gravity and refractive index tables . . . Well illustrated with photographs . . . and drawings . . . The instruments that Mr. Anderson recommends are necessarily all British . . . The high standard of the early chapters is not maintained to the end . . . However, it is certainly a practical book with a new approach and is one that every jeweler will find very desirable." *F. H. Pough.*

Anshen, Melvin. Introduction to business. 640p. Macmillan, New York, $4.

Journal of business education, Nov. 1942, p.33. ¼ col.

"A general survey of the field of business to be used as an introduction to the study of business by college freshmen . . . Covers the usual basic services and functions of business thoroughly . . . Should receive careful consideration by those who are in a position to use it as a textbook."

Ansley, A. J. Temperature control. 122p. 1942. Chapman & H., London, 13s. 6d. net.

Chemical trade journal, Nov. 13, 1942, p.428. ½ col.

"With thermostatic control a factor of ever-increasing importance in both industrial and laboratory operations, a work dealing exclusively with the fundamentals of the various methods used for such control is assured of a general welcome. The laboratory worker will find ample information to enable him to construct his own thermostat and check its performance, whilst the value of the book is enhanced by its inclusion of good descriptions of industrial or commercial thermostatic control instruments. The temperature range covered is from 0° C. to about 1,500° C., whilst the methods described include those dependent on liquid expansion, vapour baths and vapour pressure, gas expansion and metal expansion; and on the various electrical methods, such as change of resistance with temperature, temperature control using the photo-electric effect and thermo-electric current control. Two useful chapters deal with the special problems of temperature control in liquid baths and in air baths, whilst appendices give information on such essential auxiliary equipment as relays, galvanometers, etc . . . The book as a whole seems reasonably free from misprints and similar errors."

Iron and steel, Nov. 1942, p.64. 1 col.

"Treatment throughout is descriptive and non-mathematical. In the limits imposed by 120 odd pages no exhaustive treatment of any section of the subject is possible, and to do him justice the author disclaims such an attempt. The information, he says, must be regarded more as a guide than as a complete solution to every control problem. As an introduction to the subject it is readable and interesting and there are numerous references to the technical literature. But even in wartime 13s. 6d. seems rather much for a work of the kind."

Bailey, Neil P. Principles of heat engineering. 264p. 1942. Wiley, New York, $2.75.

Blast furnace and steel plant, Nov. 1942, p.1270. ⅛ col.

"Information is presented in a framework of theory and is expressed quantitatively so that it may be useful for the solution of engineering problems . . . Every effort has been made to include up-to-date and reliable tables of the physical constants needed for the solution of elementary heat power problems and to illustrate the important applications with sample solutions. The limitation of the descriptive material to the functional aspects of heat power equipment reflects the conviction that the purely descriptive portion of a course is best presented through the medium of the laboratory and current literature."

Heating and ventilating, Oct. 1942, p.66. ⅛ col.

"Seldom is the broad field of heat engineering discussed so interestingly and explained so thoroughly as in this book. The author . . . is possessed of a style which makes for easy understanding; and, even though the subject is by nature a complex one, the text in most of its passages is readily followed . . . Divided into 17 chapters dealing with such subjects as: characteristics of gases; thermal energy; com-

bustion of fuels; heat transfer; compression of gases; internal combustion engines; steam engines and turbines; boilers, condensers, and powerplant cycles; and refrigeration. Twenty-five pages . . . are devoted to problems . . . [Contains] a subject index."

Machine design, Nov. 1942, p.100, 102. ½ col.

"Written primarily as a text for engineering courses at college level, the book covers what may be considered the minimum requirement for any engineer today, and can be recommended to practicing engineers desirous of bringing their knowledge up to date. Theoretical treatment is thorough and in every case is pointed toward practical applications of current importance. Logical appreciation of the behavior of gases is aided by frequent use of the kinetic theory of gases. Beginning with basic concepts, properties of gases, vapors and mixtures, thermal energy, combustion, and heat transfer, the book leads on to discussion of compressors and blowers, internal combustion engines, steam engines, nozzles, turbines, condensers, boilers, power plant cycles, and refrigeration. References and suggested reading lists [are] at the end of each chapter."

Power, Nov. 1942, p.184. ⅛ col.

"A book this reviewer would choose to teach thermodynamics to students of college grade that were not too much afraid of an integral sign. Mr. Bailev not only hits the fine-pointed nails of thermodynamics on the head accurately and concisely but illustrates each point with the kind of example power-plant designers meet in actual practice . . . Includes 40 pages of excellent and searching problems . . . A better book for class work . . . than for reference or self-study."

Baker, H. Wright. See **Inchley's** theory of heat engines.

Baldwin, Henry Ives. Forest tree seed. 240p. 1942. Chronica Botanica, Waltham, Mass., $4.75.

Journal of forestry, Nov. 1942, p.887. 1⅔ col.

"Considering the book from the standpoint of what it contains, it is an impressive publication, marked by great thoroughness, care, and scholarship. Considering it from the standpoint of what the average forester might expect to find between the covers of a book on forest tree seed, it is perhaps likely to be disappointing. The author himself would probably be the first to admit this. The book should not be judged by its title, nor even its table of contents, but rather by these words from the preface. 'Unfortunately the original plan of assembling a truly comprehensive reference book had to be abandoned, and the present treatise can but suggest lines of approach. It is admittedly a compilation and many of the chapters . . . have been drastically reduced. The task has rather been one of selection of materials to include and discard, in an attempt to bring together some of the widely scattered knowledge on tree seed.' Within these limitations the book is outstandingly good." *Frederick S. Baker.*

Science, Dec. 18, 1942, p.560. 3 col.

"The study of tree seed cuts across the fields of genetics, embryology, histology, morphology, physiology and biochemistry on the one hand, phenology, bioclimatics, ecology, pathology, parasitology and entomology on the other. An authoritative book on tree seed is therefore both a welcome addition to plant science literature and a much-needed reference book for the many men who are engaged directly or indirectly in the use of tree seed for forest, ornamental or other planting . . . On the whole . . . the book is scholarly, readable and informative. It fills a long-felt need. Not the least of its valuable contents is the 16-page glossary of tree seed terminology that immeasurably increases its utility. It is hoped that this book will help to open the field for intensive study during the coming years." *Hardy L. Shirley.*

Banks, Charles W. Applied science. 212p. 1942. Wiley, New York, $1.75.

Review of scientific instruments, Oct. 1942, p.460. 1½ col.

"This book is a development of the earlier textbook of the author entitled *Elementary Applied Science* which has been used in technical and shop courses since 1927. The material treated in this text consists of selected topics of physics and their applications dealing, mainly, with mechanics and, less extensively, with heat, light, and electricity. To be specific 127 of the 212 pages are devoted to various topics of mechanics and 77 pages to heat, electricity, and light, while eight pages are devoted to reference material . . . Operational definitions, together with practical examples, many of which are taken from practice, appropriate illustrations and diagrams and solved numerical examples make each topic very readable and will undoubtedly leave the student with a sense of growth and mastery of the topic . . . On the whole, considering the limited number of pages within which the material is covered and the limited time within which the subject is ordinarily taught the reviewer feels that this text should be of great help to the teachers of applied science and that it is well adapted to the needs of students in technical schools or to the needs of science students who take certain terminal courses in junior colleges." *Philip A. Constantinides.*

Barron, Harry. Modern synthetic rubbers. 258p. 1942. Chapman & H., London, 25s. net.

Chemical trade journal, Nov. 6, 1942, p.402. 1¾ col.

"Dr. Barron has placed chemists and others interested in the synthetic rubbers under a distinct debt by his timely contribution to this highly topical subject. There has, so far as we know, been no other book published dealing exclusively and systematically with the synthetic rubbers; and on this ground alone, Dr. Barron would seem to be assured of a wide readership. The claims of the work are, however, far broader based, since the author covers, authoritatively, the complete subject ground from the historical, scientific and utilisation grounds. So far as the technical production of the synthetic rubbers is concerned, very little information, except in the case of some of the thioplasts, has been published, but what information is obtainable from the published literature the author has gathered into his net . . . Seems, on the whole, free from serious misprints and allied errors."

Electrician, Nov. 20, 1942, p.560. ⅜ col.

"Deals with all the leading commercial types of synthetic rubber, and particularly with their relationship to natural rubber . . . In three sections. The first deals with general considerations, both technical and economic . . . The second section covers the chemical and physical background of synthetic elastic materials . . . The third section deals with the technology of synthetic elastic materials . . . Illustrated with a number of excellent photographs, and equipped with a name- as well as with a subject-index."

Bartholomew, Wilmer T. Acoustics of music. 242p. 1942. Prentice-Hall, New York, $3.

Radio-craft, Nov. 1942, p.127. ¾ col.

"An excellent book for those interested in good quality reproduction from loudspeakers of radios and phonograph amplifiers, as well as those who play a musical instrument. Mr. Bartholomew, who is a member of the staff of the Peabody Conservatory of Music, bridges the gap from theoretical or physical concepts of music to actual auditory response and the effects of sound on our ears. Such a work has long been needed. Without mathematics he has brought the subject up to date, weaving in the practical aspects of the art as explained by modern research."

Review of scientific instruments, Oct. 1942, p.450. 1 col.

"Treats of the nature of vibration and its relationship to music . . . sound waves and their

characteristics . . . vibratory sources of sounds used in music . . . harmony and scales . . . hearing, including the Bell Laboratories' chart of loudness contours so familiar to everyone; electronic recording, reproduction and synthesizing of sound . . . The presentation . . . in all sections save the last two seems to be adequate and well planned for a work of this size, but the writing, except in a few spots, leaves something to be desired. The subjects run down instead of ending. The purple passages are only mauve and there is a regrettable lack of punch . . . The section on hearing aids suffers for want of pictures . . . An audiogram would help to clarify the section on deafness . . . There is no mention of stereophonic recording and reproduction, no discussion of sound scoring practice developed in the motion picture industry, or electronic aids to flesh shows . . . On the black side of the ledger, Mr. Bartholomew has done the best job so far in talking his way through the subject of acoustics, using the musician's language and the imagery of the musician." *Harold Burris-Meyer.*

Batley, R. L., & **Barber,** E. G. Boiler plant technology. 284p. 1942. Pitman, London, 15s. net.

Mechanical world, Oct. 23, 1942, p.400. ½ col.

"The object has not been to describe plant but to deal more with the operating technique. Fundamental theory is treated completely and there is a bibliography at the end of each chapter . . . Opens with an account of the chemistry of the subject, describes the various fuels and then goes on to details concerning the sampling and analysis of coal and coke, including refuse. A chapter on meters and measurements precede [sic] one on boiler testing, after which approximate combustion calculations are explained and boiler efficiency control discussed. Before going on to a full treatment of the subject of boiler water the authors deal with refractories and flue gas cleaning. There are two chapters on water analysis, and others equally detailed on feed water treatment and boiler water conditioning."

Bichowsky, F. Russell. Industrial research. 126p. 1942. Chemical Pub., New York, $2.50.

Ceramic age, Nov. 1942, p.149. ½ col.

"The initial part of the book deals with an analytical discussion of research and what it is, distinguishing activities of this kind from engineering and regular development. The value of research is emphasized in a logical and practical manner . . . Will be read with real profit by all who are identified with research activities in its various channels."

Drug and cosmetic industry, Nov. 1942, p.563. ½ col.

"A manual for the research director and for the business executive."

Glass industry, Nov. 1942, p.442. 11 l.

"Presents the theory of research and the general principles of management and organization which have proven successful in the laboratory. It is a manual for the research director and for the business executive. Application is made of theory to detailed problems which arise in practice. Factors of invention are thoroughly covered; advantages and disadvantages of research for the small company, and for the large company; equipment, and technical control of the laboratory."

India rubber world, Nov. 1942, p.205. 12 l.

Paper industry and paper world, Nov. 1942, p.890. ⅛ col.

"Treats of the following subjects: Research the Destroyer of Business; Research the Creator of Wealth; What is Research; The Prenatal Factors of Invention; The Postnatal Factors of Invention; Research for the Small Company; Place of Research in Company Organization; The Equipment of the Laboratory; and Technical Control of the Laboratory."

Textile world, Nov. 1942, p.111. ⅛ col.

"Discusses the social importance of research and outlines the general principles underlying the organization and management of industrial research . . . A must for both research directors and top executives."

Bierman, William. Medical application of the short wave current. Ed.2. 1942. Williams & Wilkins Co., Baltimore, $5.

Pennsylvania medical journal. Nov. 1942, p.174. ⅛ col.

"The second edition . . . has been condensed and some of the chapters have been reviewed and rewritten. Many of the illustrations have been changed and new ones have been added. Technics have been simplified and produced in a manner much clearer than in the original volume . . . Practical, beautifully written, and well illustrated. Your reviewer recommends it very highly, not only to the practitioner but also to the student and specialist, as one of the best volumes from the press of the publisher."

Blumenthal, Saul. Food manufacturing. 664p. 1942. Chemical Pub., New York, $7.50.

Canning age, Nov. 1942, p.642. ½ col.

"Replete with new formulas and pertinent tables, this latest book on food manufacturing covers the field from chocolate products to vitamins and should give the manufacturer much valuable information . . . Highly informative and interesting. The drying and freezing of fruits and vegetables is [sic] well described . . . Contains charts which set forth, clearly and concisely, the upper and lower limits of temperatures and concentrations during processes of manufacturing . . . Written primarily for the baking, beverage, flour, confection, preserving, ice cream, and condiment industries."

Food industries, Nov. 1942, p.95. ⅜ col.

"Much general information about food products, ingredients and formulas is presented . . . But in the strict sense of the term, 'food manufacturing' is dealt with rather lightly. In fact, the book might more appropriately be titled 'Formulas for Foods'."

Spice mill, Nov. 1942, p.24. ¼ col.

"A great number of factory-tested commercial formulas and recipes are given which are of definite value to food manufacturers . . . Covers practically every branch of the food industry such as canning, flavoring, beverage, confectionery, essence, condiment, etc., together with a description and analysis of the materials used in the various fields . . . Contains tables of weights and measures, chemical glossary, bibliography and abbreviations . . . Should be of special interest to the food manufacturer, chemist and technologist."

Boyan, Edwin Arthur. Handbook of war production. 368p. 1942. McGraw, New York, $3.

Aviation, Nov. 1942, p.271. ½ col.

"From interviews with more than 200 government officials and manufacturers already engaged in war production, Prof. Boyan of the Massachusetts Institute of Technology has produced a lucid, immensely practical study on exactly how plowshare manufacturers can get into the sword business. For managers of large and small plants he has analyzed the specific steps required in procurement of contracts, conversion to war production, procurement of materials and supplies, production planning and control, labor and expansion, quality control of war production, conservation of strategic materials, industrial accounting in wartime, estimating for war contracts, and planning and control in subcontracting . . . 'Know where you are going, and move heaven and earth to get there,' advises one manufacturer. This book is a detailed, useful elaboration of this general instruction."

Breckenridge, Robert P. Modern camouflage. 280p. Farrar, New York, $3.50.

Engineering news-record, Oct. 8, 1942, p.96. ⅜ col.

"Clearly and concisely, Major Breckenridge has set forth in this little book the essentials

of camouflage as they relate to civilian operations . . . [Contains] well chosen illustrations . . . Industrialists concerned over the safety of their plant can read this book with profit . . . Engineers interested in protective concealment for industrial plants will find it by far the best book yet written on the subject. It is full of specific answers to the many questions that arise when plans made on a drawing board or a model table must be converted in reality to the field."

Military engineer, Nov. 1942, p.580. ⅔ col.

"A must book for anyone who is making a serious study of the science of protective concealment . . . 'With a background of thorough study, with experience as a member of the Engineer Board of Fort Belvoir, and enlightened by all authoritative accounts of what has been done abroad, the author offers in this book a concise and reliable account of the bases of protective concealment against attack from the air' . . . [Includes] a color chart of the nine official Army camouflage colors and 132 photographs and diagrams."

Western flying, Nov. 1942, p.116. ⅓ col.

"Written for those persons who might, in some way, have occasion to prepare a manufacturing plant, home or other building for concealment from the air, this book may well be recommended for serious attention . . . Contains a complete discussion of the phases of our more general conceptions of camouflage, and continues to uncover new ideas and methods which are extremely interesting and seemingly inexhaustible."

Brick, R. M., & **Phillips,** Arthur. Structure and properties of alloys. 227p. McGraw, New York, $2.50.

Foundry, Dec. 1942, p.99. ¼ col.

"Will be valuable not only for defense training courses given to industrial employes, but for general engineering students who will use metals and should understand the basis for compositions, heat treatments, structures and properties."

Heat treating and forging, Nov. 1942, p.597. ⅓ col.

"Fourteen chapters contain such subjects as Cold Working and Annealing; Solid Solutions; Eutectic Alloys; Age Hardening; Phase Trasformations [sic]; Iron-Carbon Alloys; Structural, Forged and Cast Steels; Theory of Heat Treatment of Steels; Heat Treated Automotive and Tool Steels; Cast Irons; Monotectics."

Metal finishing, Dec. 1942, p.667. ⅜ col.

"Covers a narrow field of physical metallurgy and deals almost exclusively with the correlation of structures of metals and alloys with phase diagrams . . . An outstanding feature . . . is the inclusion of many beautiful photomicrographs to illustrate the various features discussed in the text . . . The book in the main is very well done but suffers in many spots from brevity and it is hoped that the authors may some day expand this treatment of alloys to publish a much needed comprehensive text on the subject . . . Should fill a unique and valuable place in the literature of physical metallurgy." *W. R. M.*

Metals and alloys, Dec. 1942, p.1176. ⅝ col.

"Without attempting to cover metallurgy as a whole, it deals particularly with the correlation of phase diagrams and microstructure with the properties of alloys. It tries to link the metallographer more closely with the engineer . . . It's a good job . . . The authors have stuck closely to what, as they admit in the preface, is a 'narrow field.' Most readers will regret that they did confine themselves so closely, but will nevertheless be thankful for the clear and authoritative treatment of what they did cover." *H. W. Gillett.*

Welding journal, Nov. 1942, p.810. 11 l.

"This text seeks to establish the correlation among alloy phase diagrams, micro-structures and properties. Especial attention has been directed to the effect of industrial practices in casting, working and heat treating alloys on the application of, or departure from, theoretical principles. One hundred thirty-six photo-micrographs, with full descriptions of their origins, illustrate normal and abnormal structures of most standard alloys."

Brookes, Bernard. How to fly an airplane. 234p. Consolidated, Chicago, $1.

American aviation, Nov. 15, 1942, p.22. ¼ col.

"In conversational style, much more informal than technical, and is well illustrated both with photographs and diagrams, the latter being especially good. It is one of the best books of its kind to make its appearance. The drawings alone are valuable for instructional purposes since they are simplified to a gratifying extreme."

U. S. air services, Nov. 1942, p.42. 1 col.

"This book is written so clearly, at the same time so in detail, that should a boy read it carefully, he may sit in his reading chair, draw upon youth's well-known vivid imagination, manipulate this and that imaginary control and fly the skyways to his heart's content. And we gamble that if a boy does just this, when the time comes for practical instruction in a real airplane his basic training will come as nothing new or strange, just a review of things of which he is already familiar. Captain Brookes doesn't write down to his public. There is no baby-talk . . . A full man-sized dose of basic instruction is given."

Byerly, Perry. Seismology. 256p. 1942. Prentice-Hall, New York, $4.65.

Economic geology, Nov. 1942, p.642. ⅔ p.

"Here is an attempt to cover *in brief* the field of earthquake seismology . . . The first part . . . is on the subject of earthquakes and requires little technical knowledge. Its chapters touch on Elasticity and Plasticity, Earthquake Vibrations, Immediate Cause of Earthquakes, Underlying Causes of Earthquakes, Effects of Earthquakes, Distribution of Earthquakes, Great Earthquakes. The second part . . . presupposes readers with some preparation in mathematics and physics and presents, in greater detail, material on The Seismograph (the different types and methods of recording), Elastic Waves, Paths of Waves and Travel Time Curves, Location of Epicenters, and Seismograms. Photographs are from the file of the Berkeley seismograph station and, with one exception, leave something to be desired in reproduction. However, the other figures and maps are clear and readable." ***Bernarr Bates.***

Calcium Chloride Association. Refrigeration data; with special reference to the use and properties of calcium chloride for refrigeration brine. 71p. 1942. The Association. 4145 Penobscot Bldg., Detroit, gratis unbound.

Food industries, Nov. 1942, p.95. 11 l.

"Information on the requirements and maintenance of refrigeration brine, the use of corrosion inhibitors, the mechanics of refrigeration and the flow of brine in pipes are [sic] discussed. And there are charts and tables on the properties of calcium chloride; ammonia; size, displacement and refrigerating capacities of piping, pumps, tanks and ice cans; insulating materials; and the storage properties of foods."

Camm, F. J. Engineer's pocket book of tables, formulae, and memoranda. 492p. 1942. Chemical Pub., New York, $4.25.

Engineering and mining journal, Oct. 1942, p.73. 10 l.

"Really compact and will fit pocket or tool chest. The material contained is such as would be needed for work in the machine shop or related design and drafting. That the book has been prepared in Great Britain is indicated at various points, particularly in the preface, where the sources of data are credited."

Camm, F. J., ed. Practical mechanics handbook. Ed.4, revised. 392p. 1942. Chemical Pub., New York, $4.

Aeronautical engineering review, Oct. 1942, p.79. ⅝ col.

"Information and tables of value to mechanics, engineers and draftsmen is [sic] contained in this handbook . . . A fully cross-referenced index is furnished . . . The writer has concentrated on the incorporation of material that the reader is most likely to need in his work and has avoided giving information of little value to the majority of readers . . . Some of the many subjects covered are the lathe, small tools, the micrometer, mensuration, screw and gear cutting, case hardening, the chemical coloring of metals, electroplating, silver soldering, brazing, welding, soldering aluminum, obtaining a patent, the metric system, patternmaking, battery charging, sharpening woodworkers' tools, mechanical drawing, blueprints, glues, cements and adhesives."

Motor age, Oct. 1942, p.80. ⅝ col.

"Bulges with information on every conceivable machine-shop operation . . . The volume is profusely illustrated but here the reader encounters one of its faults. The line drawings are excellent but the half-tones are too fine for the quality of paper used, with the result that the many half-tones used are so dark as to be almost valueless. Another shortcoming . . . is the fact that English rather than American nomenclature and standards are used."

Camm, F. J., ed. The superhet manual. 135p. 1942. Chemical Pub., New York, $2.50.

American journal of science, Oct. 1942, p.743. ½ p.

"A very useful little book, dealing not only with issues immediately relating to superheterodyne operation, but with radio devices in general . . . Designed to acquaint the practical radio expert and the enlightened amateur with the principles of action of the various appliances, general design, and servicing of modern radio sets. Mathematical considerations are held to a minimum . . . Anyone who understands the general principles of electricity but is not conversant with their specific applications in radio technique will find this book highly satisfactory. Anyone who wishes to learn the terminology peculiar to this field will read it with profit. The printing is tolerable, though one would expect it to be better in view of the price." *Henry Margenau.*

Carbide and Carbon Chemicals Corporation. Vinylite resins; their forms, properties, and uses. 200p. The Corporation, Plastics Division, 30 E. 42nd St., New York.

Paint and varnish production manager, Oct. 1942, p.276. ½ col.

"Describes briefly the four major types of vinyl resins and the various plastic materials produced from them including Rigid Sheets, Flexible Sheeting and Film, Molding and Extrusion Compounds, Adhesives, and Resins for Surface Coatings . . . Contains tables of properties as well as charts showing the principal applications of VINYLITE Plastics."

Clark, Norman J., & **Corbitt,** H. E. Aircraft electricity. Revised edition. 343p. Ronald, New York, $3.50.

Aero digest, Nov. 1942, p.387. ⅔ col. including an illustration.

"The most modern methods and procedures involved in the installation and design of electrical equipment in aircraft is [sic] presented . . . Starting with the symbols, basic circuits and commonly used items of electrical equipment, the book advances through a study and explanation of aircraft lighting systems. Each chapter deals intelligently with the problems involved and offers excellent suggestions for conforming to standard requirements by the Army Air Corps and the Navy's Bureau of Aeronautics. Over 50 plates, charts and tables . . . are an aid to understanding the text. A study of this book will give the neophyte or the engineer increased knowledge of the electrical power demanded of present-day aircraft and of those on the drafting boards."

Western flying, Nov. 1942, p.116. ¼ col.

"Devoted specifically to aircraft electricity . . . The authors had in mind three specific groups to whom it should be of particular interest and value. These are: (1) the electrician with practical shop questions, and the designer making calculations and layouts; (2) the electrical parts manufacturer concerned with aircraft equipment, or those proposing to enter the field in the immediate future; (3) the practicing aircraft electrical engineer, for reference."

Clinics; edited by George Morris Piersol. v.1, no.1. June 1942. Lippincott, Philadelphia, $12 per year.

Pennsylvania medical journal, Nov. 1942, p.176. ½ col.

"In response to the increased tempo of medical progress, the old International Clinics have been modernized into this new Lippincott publication . . . *Clinics* as it is called is to be a bimonthly publication and is to represent not only what is good in medical work but also what is significant in medical progress with respect to our present and future status as a nation. Each issue is to embody a symposium on some important subject, some original contributions, a series of clinics, and, when the subject is timely enough to warrant using the space, a 'review of recent progress' article. The symposium in this issue concerns burns and shock . . . The medical profession will welcome this new journal because it is a most worthy form of literature, it embodies a variety in each issue, and the material included is presented in a concise and scholarly fashion. Today the busy physician has little time for wasteful reading and such journals as this one can easily replace many new texts and old overstuffed journals."

Cole, Warren H., & **Puestow,** C. B. First aid; surgical and medical. 351p. Appleton, New York, $3.

Drug and cosmetic industry, Oct. 1942. p.435. ½ col.

"Although the greater part of the text consists of consideration of emergencies which are related to conditions created by war, every effort has been made to include emergencies encountered in civilian life, many of which are medical, not surgical. Subjects such as wounds, burns, hemorrhage and shock are taken up in considerable detail; in general when dealing with emergencies of the military type the authors have stressed particularly treatment which is being adopted by the American Armed Forces in the present war."

Comstock, John P. Introduction to naval architecture. 209p. 1942. Simmons-Boardman, New York, $4.

Marine engineering and shipping review, Oct. 1942, p.304, 306. ⅝ col.

"This book is substantially the course in theoretical naval architecture given to the hull drafting apprentices at the shipyard of the Newport News Shipbuilding and Dry Dock Company . . . Divided into two parts, the first covering ship calculations and the second ship design . . . Problems are given throughout . . . Answers to the problems are given . . . The first twelve chapters explain the various calculations which must be made, several times over, during a design; first very approximately, then, as the design takes a definite shape, more and more accurately. In the last four chapters a 'problem' ship is presented and the basic design worked through to show the trial-and-error methods and the occasional back-tracking involved in such work. As the work has been written primarily as a textbook for high school graduates who have not had the benefit of training in higher mathematics, it is not intended as a substitute for standard reference books on naval architecture. On the contrary, it is designed to lead the student to such books . . . Well arranged, clearly

printed, with a good index, and will fill a long-felt want in every shipyard and naval architect's office, particularly among students who are endeavoring to master the intricate problems of ship design."

Cook, A. A. Radial detection; a guide to the use of the radial detector, miscalled the divining rod. 98p. Angus & R., London, 3s. 6d.

Engineering and mining journal, Oct. 1942, p.73. ¼ col.

"Those who have no faith in dowsing, as the use of the divining rod is termed, will be amused, or annoyed, according to the state of their digestion, at the pretense here made of a scientific treatment of a scientific subject. The aid of those who can help 'push the subject *further* on to the scientific basis' is prayed for in a note by the author, who admits that he might have more knowledge of 'radiation' and electromagnetism than he possesses. The outstanding chapter, to the reviewer at least, is the 13th, which deals with use of the detector in selecting sires for stud stock!"

Cookson, W., & **Bold,** A. Elements of sheet metal work. Ed.2, revised. Technical Press, London, 6s. 6d. net.

Sheet metal industries, Oct. 1942, p.1516. ¼ col.

"This elementary textbook sets out sound principles, rather than giving specific examples, the whole being illustrated by line drawings at every necessary point. It is rather a pity that a whole chapter is devoted to simple arithmetical calculations as this knowledge could surely be assumed, but the loss of 15 pages only detracts slightly from the over-all value of a very sound and practical book which will be in steady demand for many years."

Cornetet, Wendell H. Methods of measurement. 132p. McKnight, Bloomington, Ill., 80c.

Machinery (New York), Nov. 1942, p.268-B. ¼ col.

"The first of a series of five books prepared with the object of improving the instructional material used in teaching related science to vocational students . . . Gives the student information on the various methods of measurement used in industry, and the tools employed. Exercises are provided for each type of tool to train the student to make accurate and exact measurements. Instructions are also given on measuring properties of materials, such as temperature, specific gravity, and tensile strength."

Cowdry, E. V., ed. Problems of aging; biological and medical aspects. Ed.2, revised and enlarged. 936p. 1942. Williams & Wilkins Co., Baltimore, $10.

American naturalist, Nov.-Dec. 1942, p.616. 1 p.

"A conscientious reviewer might grow aged in an attempt to digest all the data in this great compendium. Thirty-seven authors, including a number of outstanding leaders in general biology, physiology, medicine, psychology and anthropology, have focused their thoughts on a problem that has always been a main concern to man . . . The work is revised throughout and contains nine new chapters by eleven new contributors . . . The most fundamental deficiency in the volume, from the biologist's viewpoint, is the lack of a thorough integration of ideas on the biological significance of aging. Why has it come about that organisms . . . grow old and die? Why do some live but a few days, others for more than a century? Why do some kinds of organisms stop growing whereas others continue to grow indefinitely? . . . There is presented . . . much information bearing on these problems, particularly data from researches on mammals, but far too little space is given to the general biology of senescence."

Croneis, Carey. See **Eardley,** Armand John.

Davis, Calvin Victor, ed. Handbook of applied hydraulics. 1085p. 1942. McGraw, New York, $7.50.

Engineering news-record, Nov. 5, 1942, p.103. 1 col.

"Any attempt to appraise such a comprehensive work within the space available in these pages is quite out of the question. A measure of its scope and authority, however, is given by a listing of the sections and participating authors. Hydraulic Formulas, W. L. Voorduin; Hydrology, C. S. Jarvis; River Regulation by Reservoirs, Theodore T. Knappen and Calvin V. Davis; Gravity Dams, Calvin V. Davis; Arch Dams, Ivan E. Houk; Buttress Dams, E. H. Burroughs; Earth Dams, Theodore T. Knappen; Rock-fill Dams, I. C. Steele; Spillways and Streambed Protection Works, E. W. Lane; Spillway Crest Gates, James S. Bowman; High-pressure Outlet Works, P. A. Kinzie; Canals, Flumes, Conduits, Tunnels and Pipe Lines, Julian C. Hinds; Hydro-electric Plants, John C. Stevens; Hydraulic Machinery, Lewis F. Moody; Water Supplies, Water Distribution and Water Treatment, Thomas R. Camp; Sewerage and Sewage Treatment Hydraulics, Samuel A. Greeley and William E. Stanley; Irrigation and Irrigation Structures, Ivan E. Houk; Drainage, George W. Pickles; Hydraulic Models, George H. Hickox."

Power, Nov. 1942, p.186. ⅔ col.

"Presents the fundamental principles basic to each sub-division of hydraulic engineering and then demonstrates the practical applications of these principles by examples drawn from records of recently constructed projects. Over 60% of the space is devoted to those subjects connected with river regulation and hydro-electric developments and pumping plants. The remainder treats of water supply and treatment, sewage systems, irrigation and drainage with a closing chapter on the use of several types of hydraulic models and their construction. General formulas, tables and diagrams more or less common to each of the 23 sections . . . are summarized as a convenient reference in the first section, and special application [sic] of hydraulics are set forth in the section where they relate . . . Treatment is very practical. To the engineer this book furnishes practical reference data for the planning and design of modern hydraulic structures and for the student a practical text on hydrology, water supply, sewage, water power, hydraulic structures and other related subjects."

Downer, A. E. Practical mathematics of aviation. 120p. 1942. Pitman, New York, $1.

Aeronautical engineering review, Nov. 1942, p.201. ½ col.

"Offered as a practical presentation of the subject and opens with a review of elementary arithmetic. The second chapter deals with the simple algebraic equation, which is the foundation for evaluating formulas, the subject taken up in the next chapter. Following chapters deal with the reading and plotting of graphs, ratios, proportions, and percentage; the right triangle; and geometric constructions. In the final chapter a few of the more simple applications in mechanics are covered. The remaining pages contain answers to problems and tables of logarithms and trigonometric functions."

Dunlop, D. M., and others, ed. Textbook of medical treatment. Ed.2. 1942. Williams & Wilkins Co., Baltimore, $8.

Pennsylvania medical journal, Nov. 1942. p.172, 174. 1 col.

"Although this text is considered only a handbook of treatment, it is a sizable volume and really attempts to cover too much. As a result of this ambitious effort, several sections are most inadequate . . . There are several new sections dealing with such technical procedures

as lumbar puncture, oxygen therapy, etc . . . There is a notable dearth of material in the section on gastritis. There is a good section on common tropical diseases—a subject which it may behoove us to take some interest in soon. Also included is a good section on industrial diseases in which we find the subject of miners' nystagmus, pneumoconiosis, etc. The treatise on obesity is extremely well done. The dietetics throughout . . . are very helpful, although not practicable in England today. It should be mentioned that this text is actually a symposium on therapy and is edited by three outstanding medical authorities . . . On the whole, this text is quite pleasing to the reviewer, although it has its shortcomings and deficiencies. One would hardly use it as a constant textbook, but for occasional reference it is most useful and frequently profitable."

Dyess, W. Ben, & **Gilmore,** R. O. Mathematics of business and finance. 219p. McGraw, New York, $3.50.

Journal of business education, Nov. 1942, p.33. ½ col.

"A thorough and clear presentation of business mathematics for students of accountancy, banking, and business administration . . . Provides materials for a one-year course of 96 hours. A 214-page Appendix of compound interest and annuity tables by Frederick and Maude Kent is included . . . This Appendix with its ten-place tables is an important tool in the solution of advanced problems and exercises presented in the units of this textbook."

Eardley, Armand John. Aerial photographs; their use and interpretation; edited by Carey Croneis. 203p. 1942. Harper, New York, $2.75. (Harper's geoscience series.)

American aviation, Nov. 15, 1942, p.22. ⅛ col.

"The author has taught courses in aerial photography at the University of Michigan and has made a valuable contribution to the subject with this current revised edition. Certainly in the field of aerial photography this book will be a 'must,' although it is somewhat too technical for the layman . . . Well illustrated with plates and figures."

Bulletin of the American Association of Petroleum Geologists, Dec. 1942, p.1849. ⅝ p.

"The fundamental impression a reviewer gets is that the book is intended as a practical guide for class and laboratory work. The exercises are planned in such a manner that they refer to aerial photographs which are available in spite of war-time restrictions . . . Inasmuch as trained geologists are naturally adapted to the study and interpretation of aerial maps, they will welcome this book because it shows them how they may put their specialized knowledge to practical use." *W. A. Ver Wiebe.*

Oil and gas journal, Nov. 26, 1942, p.180. ⅜ col.

"The first volume to be published in a series on Geoscience under the editorship of Dr. Carey Croneis of the University of Chicago. It sets a very high standard for the remainder of the series to follow."

Western flying, Dec. 1942, p.138. ⅝ col.

"Represents the greatly expanded eighth edition of the author's 'Interpretation of Geologic Maps and Aerial Photos' which has been used a great deal in classrooms. The author, who is one of the pioneers in the university teaching of the interpretation of aerial photographs, has been able to overcome most of the difficulties which originally confronted him in presenting the material in a satisfactory fashion. Explanations of the various procedures used in interpretation are detailed and in all cases the examples of actual analyses of aerial maps are outlined in a step-by-step style. Although the geologic aspects of the subject are featured, all applications of aerial photography are carefully considered, and the military importance of the use of these maps for tactical purposes is stressed."

Engeln, O. D. von. See **von Engeln,** O. D.

Falk, Henry C. Operating room procedure for nurses and internes. Ed.3, revised. 443p. 1942. Putnam, New York, $3.

American journal of nursing, Nov. 1942, p.1344. ⅜ col.

"Should be a delight to an inexperienced person setting up a new operating suite, to an experienced supervisor who is looking for new ideas, to the student nurse who will learn much from its text and drawings, and to the intern who wishes clarification of certain operative technics." *Cordelia King.*

Felsen, Gregor. Navy diver. 223p. Dutton, New York, $2.

Military engineer, Oct. 1942, p.526. ⅛ col.

"A story of adventures built up around an accurate description of the operations of deep sea diving. It traces the life of a young man from an Iowa farm . . . through a course of intensive training at the Navy Deep Sea Diving School . . . [Descriptions] of the training of navy divers and of diving operations, including the function of the diving bell, as applied in the rescue of a submarine crew are not only interesting, but also informative, since all technical features of the story have been checked by the Navy for authenticity."

Field, Richard M., & **Stetson,** H. T. Map reading and avigation. 129p. 1942. Van Nostrand, New York, $2.50.

Aeronautical engineering review, Nov. 1942, p.199. ⅜ col.

"The methods and cameras used in aerial photography are described in detail, and practically every relationship between the aerial photograph and the making of contour maps is shown with numerous illustrations. Special districts are given intensive study so that a pilot will have a comparative idea of oblique and vertical views and contour views and maps of the same areas. The second half . . . is devoted to avigation. The use of the Air Almanac and the instruments used in air navigation are described and problems which the pilot has to solve are illustrated. An appendix gives excerpts from the Air Almanac and a vocabulary."

Sky and telescope, Nov. 1942, p.16. 1 col.

"A book that should acquaint the beginner thoroughly with two limited but difficult phases of aerial navigation, map reading from the air and celestial navigation. Whether the conspicuous limitations in subject matter constitute a strength or weakness of this profusely illustrated and well-bound volume is a difficult question . . . The beginning student of aerial navigation should find . . . [it] a most valuable supplement to his required list of books. It will replace none of them, but should greatly clarify his understanding of the subject matter covered . . . Goes straight to the point in a practical manner, and contains almost no extraneous material. The print is easy to read and the 81 illustrations are all large and well chosen." *Fred L. Whipple.*

Fjeld, E. I., & **Sherritt,** L. W. Intermediate accounting. 533p. 1942. Ronald, New York, $4.

N. A. C. A. bulletin, Dec. 1, 1942, *section 2,* p.407. 9 l.

"Confined solely to a study of corporate accounting theory and its application as part of a second-year course in accounting. The material is organized in a lucid presentation, including such aspects as the organization of the corporation, capital and capital stock, stock records, surplus, dividends, stock values, compound interest, investments, fixed assets, depreciation, fixed liabilities, reserves and funds, corrections of financial statements, statement of application of funds, and profit variation statements. There is considerable illustrative material, and a set of supplementary practice problems which are applicable to each chapter."

Forbes, Gerald. Flush production. 253p. Univ. of Oklahoma Press, Norman, Okla., $2.75.

Oil and gas journal, Nov. 26, 1942, p.180. ¼ col.

"The biography of the petroleum empire . . . comprising the six states of Kansas, Oklahoma, Texas, Arkansas, Louisiana, and New Mexico . . . The story covers Southwestern oil from the time it was used as a medicinal cureall to the 100-octane gasoline, lubricants, and synthetics of today. The author approaches his historical sequence through the several phases of the industry—geology and exploration, discovery, drilling, production, refining, byproducts, transportation, application of science, conservation, social interpretation and folkways."

Petroleum engineer, Nov. 1942, p.182. ⅔ col.

"Forbes, a newspaper man of long experience in the Southwest and a trained historian, began his investigations five years ago. His history deals with all phases of oil development . . . from the year of the first effective production in 1886 until the present. He points out that, although the Klondike and California gold rushes have become popular legends of quick wealth, the oil production of the Southwest has long since distanced both in actual fact . . . Names of the pools which beckoned investors from all over the world and called for feverish activity on the part of the drillers and producers are frequent in the book."

Frear, Donald E. H. Chemistry of insecticides and fungicides. 300p. 1942. Van Nostrand, New York, $4.

Chemical & metallurgical engineering, Nov. 1942, p.186. 1⅔ col.

"For many years there has been a great need for a reference book that would classify, evaluate and summarize our present-day knowledge on the chemistry of industrial insecticides and fungicides. Works have appeared which cover the subjects of applied entomology and plant pathology, but the present publication is the first of its kind devoted solely to the chemical aspects of this growing field . . . Concerned primarily with the composition, properties and reactions of the various chemicals used or proposed for the control of insects and plant diseases. It is valuable for the research chemist and entomologist, the biochemist, and the graduate student . . . Usefulness would be greatly enlarged if industrial and economic aspects were given more stress . . . Usefulness . . . could have been further increased by including more data in convenient tabular form, such as analyses or specifications of leading products now on the market, comparative physical constants, orders of toxicity to insects, toxicity to warm-blooded animals, etc. Also useful would have been more information on commercial and home methods of preparation, corrosive action, if any, on spray equipment, poisoning effects on soils, shipping containers and regulations. More stress, it is felt, could have been given to certain of the more promising recent developments and to the trend toward synthetic organic compounds . . . However, Frear has made a pioneer and worthwhile contribution to the field of insecticides and fungicides and he is to be commended for the thoroughness with which he has reviewed the available literature." *J. R. Callaham.*

Food industries, Dec. 1942, p.94. ⅔ col.

"Directed particularly to teachers and research workers in economic entomology, plant pathology and horticulture, that is, to those already familiar with the applications of the insecticides and fungicides. It therefore concerns itself almost entirely with the nature of the substances used, rather than with practical problems of effectiveness, cost, and availability . . . Each chapter includes an extensive list of references which should be very helpful in view of the scattered sources of information in this field."

Science, Dec. 4, 1942, p.517. ⅚ col.

"Based upon a graduate lecture course organized and given by the author at the Pennsylvania State College, and each chapter concludes with an excellent bibliography . . . Should be useful to inorganic, organic and bio-chemists, as well as to plant pathologists and economic entomologists, and it is cordially commended to them. Paper, type, presswork and binding are admirable; the proofreading has been done carefully; and some interesting illustrations of natural products are included." *Marston Taylor Bogert.*

Frier, W. T. Elementary metallurgy. 207p. McGraw, New York, $1.75.

American machinist, Nov. 26, 1942, p.1414. ⅛ col.

Foundry, Dec. 1942, p.125. ⅓ col.

"Divided into twelve chapters of which the first three describe the general features of producing iron and steel. The fourth chapter discusses methods of forming metals while chapters five and six are concerned with the constitution diagrams and the iron-iron carbide system. Heat treatment of steel is described in chapters seven and eight, and chapter nine relates to the grain structure of metals. Alloy steels, non-ferrous metals, and testing of metals are the subjects discussed in the remaining chapters."

Heat treating and forging, Nov. 1942, p.597. ⅛ col.

"This important new elementary text fills the need for a short course which will give students in technical institutes, war production courses, vocational high schools, and the like, who have had no previous knowledge of metallurgy or chemistry, an opportunity to learn the characteristics of metals and the laws which govern them. The microstructure of metal is emphasized throughout . . . with regard to the effect of rolling and forging, casting, heat treating, etc. All theories of hardening and of the control of hardness of all metals; ferrous and non-ferrous, have been summarized under one head, i.e., strained, abnormal, atomic arrangement . . . [Contains an] index."

Hamburg, Merrill C., & **Tweney,** G. H. The American student flyer. 692p. 1942. Pitman, New York, $1.50.

Western flying, Nov. 1942, p.116. ½ col.

"The Army and Navy . . . have expressed a pressing need for preliminary training in our high schools for those boys who, on graduation, will become candidates for military flight officers . . . The primary purpose of this book is to provide, under one cover, all the material needed to conduct these pre-flight courses successfully. No attempt has been made to eliminate technical nomenclature in the interest of clarity, but instead each new expression has been carefully explained on its first appearance."

Harrold, M. P. Aircraft sheet metal construction and repairs. 158p. 1942. Drake, Chicago, $1.50.

Aeronautical engineering review, Nov. 1942, p.198. ⅔ col.

"Illustrations are used freely. Some of the section headings are: aircraft structure; aircraft sheet metal work; cutting machines; hand tools for cutting and punching; seams and joints; machines for bending and forming; and metal spinning. Others deal with reinforcing and stiffening; hand tools for forming; bumping and raising; metals used in aircraft construction; screwed and riveted joints; and soldering. Also offered for study are: welding in aircraft repairs; repairs on skin covers; repairs on tanks, floats and cowling; repair of structural members; aircraft bumping; cooling and oiling systems."

Sheet metal worker, Oct. 1942, p.71. ⅓ col.

"Emphasis is placed almost entirely on detailed instructions for making repairs on actual jobs. Care has been taken to explain the basic operations in a way to make them clear to the mechanically inclined man who has had no previous training in this field . . . Most of the illustrations are in the form of sketches . . . Chapters devoted entirely to repair work

cover a variety of welding operations, repairs on metal skin covers, tanks, floats, cowling and structural members. Aircraft plumbing is discussed in a separate chapter, while another chapter is devoted to cooling and oiling systems."

Hayward-Tyler & Company, Ltd. Machine speeds and feeds. 130p. Chemical Pub., New York, $2.25.

American machinist, Nov. 12, 1942, p.1344. ⅜ col.

"Many machine tool operators, especially apprentices and those completing short machine shop courses, often need guidance in selecting the proper speed and feed for machining metals. This book has been prepared specifically for that purpose. It is a collection of tables and data relating to the machining operations on cast iron, steels, and non-ferrous metals, using high-speed steel tools. The tables group information required for each type of machine in the easiest form for quick reference . . . The speeds and feeds listed . . . are not the highest possible figures; however, they are average values which can be used with reliability to start a job The values can be increased depending upon variable operating conditions and production demands."

Foundry, Dec. 1942, p.137. ⅓ col.

"The book reflects British practice and the information is presented under the following heads: Drilling and tapping, core diameters, pipe details, drilling, drill sizes, reaming, turning, calculating speed for milling cutter, milling, straddle milling, tools, speed and feed analysis, standard limits and fits, description of fits, recommended use of fits. The section on tools is illustrated, with shapes and dimensions."

Modern machine shop, Dec. 1942, p.359, 361. ¼ col.

"Compiled for the guidance of machine operators tackling new jobs or new materials, this handy pocket-size book includes a unique collection of tables and data relating to machining operations on cast iron, steels and alloy steels, aluminum and aluminum alloys, and other nonferrous metals. As far as possible, tables containing information on the same type of machining operations but on different metals are grouped together for quick reference. To further facilitate reference, a convenient index is provided at the back of the book. Nineteen toolform charts are included."

Hegner, Robert W. College zoology. Ed.5, revised. 817p. 1942. Macmillan, New York, $3.75.

American journal of science, Nov. 1942, p.827. ⅔ col.

"The large number of teachers who have found that this comprehensive and matter-of-fact textbook fills their needs better than any of its competitors will welcome a completely revised edition. The old qualities of the book are unchanged, though some rearrangement of the more theoretical material has been found advantageous and eight plates illustrating animal color have been added. Some, including the present reviewer, will take exception to the relative emphasis accorded the different parts of the subject. The classification of each phylum or class, introduced for reference purposes only, seems to crowd out more important aspects of animal biology; the account of reef corals and of social insects is compressed to the point of inadequacy. A few errors of fact can still be noted." *G. E. Hutchinson.*

Herrick, Arthur Donald. Drug products; labeling, packaging, regulation. 462p. 1942. Revere Pub. Co., New York.

Modern packaging, Nov. 1942, p.96. ¼ col.

"A comprehensive treatise dealing with the practical application of the federal law to drugs, chemicals, therapeutic appliances and cosmetics."

Printers' ink, Nov. 6, 1942, p.70. ⅛ col.

"Explains and interprets every statutory requirement from its elementary principles to its actual application, contains hundreds of usable label forms, suggestions, hints, and warnings against possible violations . . . Deals only with drugs (and cosmetic) products—omits irrelevant food aspects of the law . . . Contains out-of-print rulings, tests and other information not readily available."

Hill, F. T. Materials of aircraft construction. Ed.5. 1942. Pitman, London, 20s. net.

Mechanical world, Oct. 23, 1942, p.400. ⅛ col.

"Many of the subjects dealt with are very similar to those in other books on engineering materials, but naturally there is more detail on the light alloys and more consideration of material in special forms and sections such as tubes, streamline wires, and materials like timber, glue, rubber, fabric and dope. The final chapter discusses the designer's selection of materials, and there are three appendices which detail materials for engines, British Standard Specifications, and Directorate of Technical Development Specifications. A number of tabular insets give data on various alloys and other materials."

Sheet metal industries, Nov. 1942, p.1692. 1½ col.

"Well illustrated and written in clear engineering language which makes the work particularly useful to engineering students and as a book of reference to the engineer. It is concise and keeps to the point under discussion. Particular emphasis is placed on the uses and misuses of materials and the reader is warned against likely mistakes he may make. Above all, and this is the most important feature, the many British Standard and Directorate of Technical Development Specifications are interrelated into the description of the materials, their properties, the tests made upon them and their uses . . . This book is to be wholeheartedly recommended, and no student or design or drawing office should be without a copy." *G. H. M.*

Hiscox, W. J. Factory layout; planning and progress. Ed.3, revised by J. Stirling. 195p. Pitman, London, 7s. 6d.

Electrical review, Oct. 16, 1942, p.488. ⅜ col.

"The book is not a new one. It is in fact a reprint of the previous edition, but it does provide a really readable exposition of the art of planning and running a factory. The conception of the scheme is that the problem falls into two parts, with on the one hand planning and routeing [sic] to establish the task and the means of performing it, and on the other hand, progress work to see that the task is achieved. Throughout . . . the author illustrates his point by reference to examples based on actual practice." *A. W. W.*

Hooper, A. A mathematics refresher. 356p. Holt, New York, $2.50.

Sheet metal worker, Nov. 1942, p.20. ⅝ col.

"Written primarily for R. A. F. trainees 'who found their mathematics rusty through disuse or who, brought face to face with facts, had to admit that they had not properly grasped the subject at school' . . . A number of exercises and test papers are given, with answers."

Huntoon, John. Learning the radio telegraph code. 34p. American Radio Relay League, West Hartford, Conn., 25c.

Electronics, Nov. 1942, p.154. ⅛ col.

"Divided into six chapters entitled: Learning the Code, Learning to Send, High Speed Operation, Operating On the Air, Code Practice, and Class Instruction . . . Advocates the method of learning based on oral rather than visual recognition of sounds making up the Morse alphabet. Thus, the radio telegraph code is considered in the light of another language having its peculiar pronounciation [sic] and syllables. This approach is in accord with what are considered to be the best practices at the present time." *R. D.*

Hyman, Libbie Henrietta. Comparative vertebrate anatomy. Ed.2, revised. 544p. 1942. Univ. of Chicago Press, Chicago, $3.50.

American journal of science, Nov. 1942, p.827. ⅛ col.

"The first edition . . . was precisely what its name, *A Laboratory Manual for Comparative Vertebrate Anatomy,* indicated. The present edition is . . . much more than a revision of the earlier work . . . The important feature in which the book differs from its predecessor is that it has been expanded into a combined text and laboratory manual . . . It is intended to be sufficiently complete so that an accompanying textbook will not be necessary for the undergraduate student in vertebrate anatomy . . . The laboratory directions have long since proved their worth. With their revision and enlargement they should be even more serviceable . . . The new textual material demonstrates Miss Hyman's amazing erudition and versatility, and includes a wealth of general and specific embryological and anatomical information . . . Attractive in appearance and convenient in arrangement . . . It is certain that few errors of fact or print will be detected." *Daniel Merriman.*

American naturalist, Nov.-Dec. 1942, p.619. ⅔ p.

"All who are acquainted with the author and her work . . . have felt sure that this new treatise from her pen would be a superior product, excellent in detail, clarity, accuracy and originality. They have not been disappointed . . . Dr. Hyman's book may prove too detailed to serve as the sole text in any but the longer courses in comparative anatomy, yet will hardly serve as a detailed reference book on chordate structures. Nevertheless it will and should find its place among the much-used books of many students and professional biologists."

Imms, A. D. Outlines of entomology. 184p. 1942. Methuen, London, 12s. 6d. net.

Nature, Oct. 31, 1942, p.505. 1⅜ col.

"Falls into two equal parts: anatomy, physiology and development; and nomenclature, classification and affinities. In both parts the allocation of space and the quantity of detail given have been decided with very sound judgment. It is an austere book 'intended for anyone who is willing to take sufficient pains to acquire an elementary knowledge of entomology as a branch of general zoology', and it makes no concessions to those who like to escape technical terms. The whole of terminology is here, sometimes in such concentrated form that concentration will be needed also by the student. But the presentation is uniformly excellent . . . In a book so concise as this, there are, of course, physiological allusions which the first-year student for whom the book is intended would probably not understand. But if he is driven to seek information elsewhere they will have served a useful purpose . . . The book as a whole challenges comparison with Weber's 'Grundriss der Insektenkunde', likewise written as a student's introduction to a larger work. The excellent illustrations of Dr. Imms's book have not the dramatic quality of Weber's. But as befits an English book the essence of the subject has been distilled into a much smaller compass, and the student who takes Dr. Imms's 'Outlines' as his first guide to serious entomology will have started well." *V. B. Wigglesworth.*

Inchley's theory of heat engines. Ed.5, edited and revised by H. Wright Baker. 445p. Longmans, New York, 16s. net.

Automobile engineer, Nov. 1942, p.488. ⅓ col.

"Destruction of stocks has provided an opportunity for reissuing a revised edition of this work and making certain alterations. The principal of these is a considerable extension of the section dealing with heat transference by convection. As a textbook, this work has an enviable reputation, covering as it does a very wide subject in a concise and comprehensive manner . . . Numerous diagrams elucidate the text and the book may be strongly recommended to both elementary and advanced students."

Engineering and boiler house review, Nov. 1942, p.207. ½ col.

"Designed to cover all recent developments on the subject . . . The fundamental scheme of the book makes it most acceptable not only to students but also to those directly concerned with heat engine operation and maintenance. The author has brought together, from many sources, the figures, diagrams and ideas which experience has shown to be specially helpful. The chapter on the reciprocating steam engine contains a mine of useful information, as does the chapter which is devoted to the design of steam turbines and turbine blading, etc."

International Nickel Company, Inc. Nickel and nickel alloys. 592p. The Company, 67 Wall St., New York, unbound.

Foundry, Dec. 1942, p.140. ⅓ col.

"This volume in loose-leaf form provides a valuable compendium of information on nickel and its alloys. While the major portion . . . is devoted to wrought materials, one section relates to castings. Various sections cover chemical composition, chemical analyses and tests, corrosion resistance, physical constants, mechanical properties of wrought monel, inconel, nickel and nickel alloys, mechanical properties of wrought special high nickel alloys and clad materials, special mechanical properties, properties of some metals and alloys, mechanical properties at elevated temperatures, mechanical properties at low temperatures, metallographic examination and x-ray diffraction analysis, working instructions, heat transfer through metallic walls, castings, and appendix . . . Has a 66-page index."

Johnson, Douglas Wilson. The origin of the Carolina bays. 341p. 1942. Columbia Univ. Press, New York, $4.50. (Columbia geomorphic studies, no.4.)

Natural history, Dec. 1942, p.271. ⅔ col.

"A fascinating piece of scientific research carried out in an admirable manner." *Clyde Fisher.*

Kovács, Richard. Electrotherapy and light therapy; with the essentials of hydrotherapy and mechanotherapy. Ed.4, revised. 735p. 1942. Lea, Philadelphia, $8.

Pennsylvania medical journal, Nov. 1942. p.171. ½ col.

"The author, with a vast practical experience, is not only a good practitioner and a fine teacher but also an able writer and editor . . . Profusely illustrated; a number of the obsolete illustrations have been eliminated, and eighty-one new ones have been added . . . Many new chapters have been added, and practically all of the old ones have been reviewed and rewritten . . . General practitioners, specialists, and technicians alike should welcome the new issue of this authoritative and practical textbook and your reviewer unhesitatingly recommends it to everyone interested in the subject."

Kraght, Peter E. Meteorology for ship and aircraft operation. 360p. Cornell Maritime Press, New York, $3.

American aviation, Dec. 1, 1942, p.25. ⅛ col.

"Vertical and horizontal winds, accompanying weather, and the problems of aircraft and seacraft involved, are discussed. Only atmospheric phenomena having a bearing on the safety and economy of aircraft or seacraft operation are scrutinized in detail. Ponderous theoretical considerations are trimmed to the bone, and converted into practical directives. Included are . . . 21 practical tables."

Western flying, Nov. 1942, p.116. ⅛ col.

"Writing for both pilot and seaman meteorologists, the author begins his text with a lucid explanation of the meteorological essentials. From this point, he works up to an unusually advanced discussion of the weather . . . Profusely illustrated with readily understood graphs and descriptive drawings . . . Includes . . . a glossary of winds, clouds and technical meteorology terms."

Kron, Gabriel. Application of tensors to the analysis of rotating electrical machinery. Ed.2. 208p. 1942. General Electric Review, Schenectady, N. Y., $4.50.

General electric review, Oct. 1942, p.598. ⅔ col.

"Includes unchanged the material of the first edition (1938) containing sixteen parts of a serial of the same title and is enlarged by the inclusion of four other articles that appeared subsequently in the G. E. Review by the same author. These additions are Part XVII entitled 'Nonholonomic Reference Frames' and Part XVIII on . . . 'The Dynamical Equations of Lagrange.' Two other articles are also included—'Equivalent Circuit of the Capacitor Motor' and 'Equivalent Circuit of the Salient-pole Synchronous Machine' . . . Certain introductory and elementary portions of the present book have been enlarged in greater detail and have appeared in two separate volumes, 'Tensor Analysis of Networks' (1939), and 'A Short Course in Tensor Analysis for Electrical Engineers' (1942)."

Krueger, Walter W. Elementary pharmacology. Ed.4, revised. 287p. 1942. Saunders, Philadelphia, $2.25.

American journal of nursing, Nov. 1942, p.1348. ⅔ col.

"Provides the student with a comprehensive foundation for advanced study. The sequence is good and irrelevant material has been avoided." *Margaret E. Wilson.*

Kuntz, George. Aircraft spot and seam welding. 107p. Pitman, New York, $1.25.

Aero digest, Nov. 1942, p.391. ¾ col. including an illustration.

"Begins . . . with the history and theory of the spot weld and devotes an interesting chapter to the metals and combinations of metals that can be spot welded, particularly as they are used in aircraft construction. A clear picture of the construction and operation of the spot and seam welding machines is presented, from the simplest to the more complex types and each is illustrated by schematic drawings and photographs. Suggestions are made to the operator for cleaning and preparing the spot welding parts in order to produce the best results. The importance of coordination between the shop and the engineering departments in the designing for spot and seam welding is emphasized by the author and data are presented to assist in this development."

Lewis, Julian Herman. Biology of the Negro. 433p. 1942. Univ. of Chicago Press, Chicago, $5.

American anthropologist, Oct.-Dec. 1942. p.708. ⅔ col.

"This excellent book is by the Associate Professor of Pathology at the University of Chicago. While by no means exhaustive, the volume persents [sic] the essential facts relating to the biology of the Negro in a well organized and readily usable manner . . . While the emphasis . . . is essentially medical and especially pathological . . . the field covered is of very wide scope, including population and vital statistics, anatomy, physiology, biochemistry, and serology . . . Should be particularly helpful to all students who are interested in learning to what extent the functional responses of Negro and white are influenced by environmental factors." *M. F. Ashley Montagu.*

Lisle, B. Orchard. Static defense of strategic oil installations. Scribner, New York, $1.

Journal of the American Society of Naval Engineers, Nov. 1942, p.675. ⅔ col.

"Preventative construction and protective concealment are the two phases of static defense dealt with . . . Designed in a format for convenient insertion in engineers' loose-leaf reference books, it contains 11,000 words of pertinent information based primarily on experience of oil men in war-torn Europe, in addition to contemporary American researches. There are numerous photographic illustrations of both camouflaged and underground installations. There also are many drawings, charts and tables, showing bomb types, functions, and relative effectiveness—complimented by the degree of protection required against them. In the first half . . . the natures of both incendiary and demolition bombs are described, their effects analyzed, and precautions in construction and maintenance prior to air attack to reduce the hazard are given . . . The second half is devoted to the question of camouflage and total concealment."

Liston, Joseph. Aircraft engine design. 486p. c1942. McGraw, New York, $4.50.

Power plant engineering, Nov. 1942, p.156. ⅔ col.

"Students entering this field of study are usually totally lacking the essential experience in deciding a logical order of procedure of engine design, so the purpose of this book is to aid these technical students in bridging the gap between the point where they have a fairly complete knowledge of the fundamentals of mathematics, mechanics and machine design and the point where they are sufficiently familiar with the application of these fundamentals to the design of aircraft engines to enable them to be of value to the aircraft-engine building industry . . . Chapters . . . deal with gas pressure forces; analysis of the crank chain and bearing loads; design of reciprocating parts; vibration, balance, reduction gearing and details of the crankshaft; cylinders and valves; the valve gear; the crankcase, superchargers, and accessories. The appendix includes; technical data on aircraft engines and engine parts; properties of aircraft-engine materials; and useful design formulas."

Lorenzen, R. A-C calculation charts. John F. Rider, New York, $7.50.

Radio news, Dec. 1942, p.38. ⅓ col.

"Here is a tremendous time saver for engineers and others who work on electrical communications and electrical power problems . . . Covers all alternating current calculations on series circuits, parallel circuits, series-parallel and mesh circuits, at frequencies from 10 cycles to 1,000 megacycles. There are 146 charts measuring 7x11" printed in two colors . . . The . . . charts contained in the book are intended for purposes of making alternating current circuit calculations with a greater speed than was hitherto attainable. They were designed, together with supplementary scales accompanying them, with the purpose of reducing the time consumed in making electrical circuit computations. This is one of the finest series of charts that we have had the pleasure of reviewing."

Low, A. M., and others. Science looks ahead. 640p. 1942. Oxford Univ. Press, London, 12s. 6d. net.

Nature, Oct. 31, 1942, p.507. ¼ col.

"Discusses sources of power, rays, science and war, materials of industry, transport, measurement, medicine, the sea, exploration of the universe, weather, communications, exploration, the cinema, and science and the criminal. Dr. Julian Huxley provides a chapter on evolution, Dr. H. Spencer Jones one on the planets, and Capt. F. Kingdom Ward two on food plants and 'living' fossils respectively; while C. G. Grey deals with aeroplanes in war, Capt. G. E. T. Eyston with speed records and Sir Alliott Verdon-Roe with flying. The forty-seven plates illustrate outstanding features of the articles they accompany, and there is a useful index."

Magnus Chemical Company. Food plant cleaning handbook. 42p. The Company, Dept. F., Garwood, N. J., gratis.

Canner, Oct. 24, 1942, p.28. 1½ col.

"As every food packer knows, the quality of the food he produces, whether canned, dried, bottled or fresh, depends greatly upon the cleanliness of his equipment. For that reason the new . . . illustrated handbook . . . is worthy of

attention . . . Discusses in detail the cleaners used for both equipment and container cleaning used in fruit and vegetable canning."

Magnus, Mabee & Reynard, Inc. Essential oils and kindred products grown and distilled in the U.S.A. The Corporation, 16 Desbrosses St., New York, gratis.

Spice mill, Oct. 1942, p.47. ⅔ col.

"Available to all concerned with flavoring extracts and essential oils of domestic origin is a comprehensive manual that has just come off the press. Between its covers are listed and described all essential oils grown and distilled in the U.S.A. The book . . . is believed to be the first of its kind on the subject."

Manning, W. O. How aeroplanes fly. 64p. 1942. Oxford Univ. Press, London, 2s.

Aeronautical engineering review, Oct. 1942, p.77. ⅛ col.

"Intended to give some of the principles on which airplane flight depends . . . Suitable for those who wish to obtain a general knowledge of airplane flight and also as a prelude to the study of more advanced books on the subject. The first chapter discusses the atmosphere. This is followed by chapters on airplanes and their wings and controls. The concluding chapters deal with airscrews, engines, and types of airplanes. Diagrams aid in clarification of the subject."

Mason, Warren P. Electromechanical transducers and wave filters. 333p. 1942. Van Nostrand, New York, $5.

Journal of applied physics, Oct. 1942, p.644. ⅔ col.

"Sets forth the fundamental analogies between electric circuit theory and mechanical theory and shows the solution of mechanical, acoustical, and electromechanical vibrating systems in terms of their equivalent electrical circuits. The first half . . . reviews electric circuit theory, including filter structures, with both lumped and distributed constants . . . In the second half . . . electromechanical transducers receive particular attention. Of special interest is the problem of the piezoelectric transducer which is solved in terms of its equivalent electrical circuit in which the numerical values are given for quartz and Rochelle salt . . . Another subject that is very well treated is that of electromechanical wave filters in which low loss vibrating mechanical elements, such as quartz, form part of the filter circuit thereby resulting in very sharp frequency selectivity. The subject matter is quite mathematical in nature and the book will appeal particularly to those having a good background of electric circuit theory and mathematics." *Frank Massa.*

Journal of the Western Society of Engineers, Oct. 1942, p.238. ⅛ col.

"The primary purpose . . . is to set forth the fundamental analogies and interconnections between electrical theory and mechanical theory . . . Much of the material has had the advantage of a classroom presentation at the invitation of the Department of Electrical Engineering at Stevens Institute during the winter of 1940-41. Numerous footnotes provide references for additional study."

Review of scientific instruments, Oct. 1942, p.450. 1⅔ col.

"This highly specialized treatise in the field of communication physics and engineering is another in the series of related texts by members of the Bell Telephone Laboratories staff. The author is himself one of the leading authorities in vibration theory and the book is in a sense a guide to and a summary of a part of the field in which he has made outstanding contributions. The pages contain numerous equivalent circuits by electrostatic, electromagnetic, or piezoelectric means . . . The book as a whole is not an easy one for the student to follow . . . There are many matters of diction and of non-technical definition which are to be regretted." *Karl S. Van Dyke.*

Matlin, D. R. Chemical gardening. 159p. $2.25.

Scientific American, Nov. 1942, p.235. ⅛ col.

"A thoroughly understandable review of the entire subject of soilless growth of plants . . . Dr. Matlin has included formulas both for the commercial grower and for the amateur, whether attempting to grow plants in aggregates or in chemical solution. Pumice culture, the author's own development, is discussed in one chapter which, together with a section on 'Plant Pathology and Diagnostic Charts' and a bibliography, makes this small volume a valuable contribution to the literature of the new gardening." *C. F. G-C.*

Metallizing Company of America. Mogul metallizer process manual. 64p. The Company, 1330 W. Congress St., Chicago, $2.

Machinery (New York), Nov. 1942, p.268-B. 9 l.

"Prepared to assist users of metallizing equipment in the proper operation of metal spray guns. It describes how to prepare the surface for metallizing, how to apply the coat, procedure in finishing, protective appliances, machine element coatings, machining the coating, and metallizing wires and their uses."

Mills, Clarence A. Climate makes the man. 320p. c1942. Harper, New York, $3.

Drug and cosmetic industry, Nov. 1942, p.565. ⅔ col.

"Clarence A. Mills is Professor of Experimental Medicine at the University of Cincinnati and Attending Physician at the Cincinnati General Hospital. Most of his work has been in medical research with the emphasis on the effects of weather and climate. He has traveled about the world pursuing this research, the results of which make very interesting reading. Climate affects our rate of growth, speed of development, resistance to infection, fertility of mind and body, happiness and length of life . . . He has many . . . challenging ideas to offer on the varying effects of caffeine, alcohol and nicotine under different climatic conditions—the relation of climate and weather to tuberculosis, hardening of the arteries, sinusitis, cancer and other ills to which the flesh is heir."

Natural history, Nov. 1942, p.217. ⅔ col.

"Our readers will accept this book with a challenge. It presents an astonishing wealth of information on climate, including unexpected coincidences that bear on important changes in human life. The reader may already know that extreme fluctuations influence human life, but the author will also show him that even relatively small changes modify health and bodily vigor, and disrupt the affairs of nations . . . There are interesting chapters on climatic problems relative to the success of the war. Other chapters deal with the individual's problem in selecting a climate to prolong life . . . The statements that changes in temperature precede revolutions, declarations of war, and changes in government may well raise doubts in the minds of our readers. Perhaps the logic of interpretation is carried to an extreme, but the book is worthy of serious consideration." *C. W.*

Ohio state medical journal, Dec. 1942, p.1168, 1170, 1172. 3 col.

"A most interesting and stimulating book . . . He has written it in an easy and popular way for the general public. In words that all can understand he explains our individual relation biologically to the climate of the community in which we live."

Molina, E. C. Poisson's exponential limit. 92p. Van Nostrand, New York, $2.75.

Army ordnance, Nov.-Dec. 1942, p.537. ⅔ col.

"Hidden under this esoteric title is a set of tables that should prove of inestimable value to the Ordnance program. The tables were assembled at the Bell Telephone Laboratories to assist in solving problems of telephone trunking and switching . . . These problems are similar to those involved in determining, for example, with

how many spare parts a tank-repair post must be supplied to meet all contingencies. It can therefore be expected that this book will see immediate application by those concerned with spare-parts supply. Another field to which these tables may be applied is that of Ordnance inspection. Mass production is not perfect; material produced under mass conditions invariably contains defective items . . . These tables provide the single tool necessary to the correct design of inspection plans. Perhaps the number of problems to which these tables can provide a solution is so great that the author chose to mention almost none. Those acquainted with the applications of probability theory to engineering problems will find adequate guidance to the use of the tables in the introduction." *H. R. B.*

Molloy, E., comp. Plant engineer's manual. 231p. 1942. Chemical Pub., New York, $3.

American machinist, Nov. 26, 1942, p.1413. ½ col.

"The plant engineer is one who must have more than a nodding acquaintance with the various types of electric motors used for driving all kinds of factory machinery. He is expected to have a knowledge of prime movers, and must be able to advise upon the most suitable methods of transmitting power from the prime movers to the various machines which are used in the plant. The information given in this book provides the plant engineer with a reference on such aspects of his work."

Foundry, Dec. 1942, p.163. ⅜ col.

"The first section covers factory electric supply, alternating current and direct current motors, steam engines and boilers, steam boiler performance, steam valves and fittings, steam, water and gas piping, diesel [sic] engines. The second section deals with transmission notes, belt and rope drives, roller chain drive maintenance, brake linings, clutch linings, lubrication. Items in the third section include pumps, air compressors and equipment, electric furnaces, electroplating plant, welding shop. The fourth section is devoted to modern factory lighting, emergency and standby plant, ventilating and air conditioning, fans, electricity tariffs, power factor, staff locating systems, tables and data. A three page double column index is provided."

Industry and power, Dec. 1942, p.151. ⅛ col.

"Designed for the use of all engineers responsible for the installation, operation, and maintenance of equipment in industrial plants."

Modern machine shop, Dec. 1942, p.359. 1 col.

Power, Dec. 1942, p.138. ⅜ col.

"A pocket book designed to provide plant engineers with convenient reference to mechanical and electrical equipment of industrial plants. Terminology and practice are British . . . In brief, this book seems too superficial for the power engineer and somewhat more technical than would be desirable for a layman." *S. A. T.*

Molloy, E. See also **"Proton."**

Morse, Richard. Wild life through the year. 158p. 1942. Black, London, 7s. 6d. net. (Black's nature pocket books.)

Nature, Oct. 31, 1942, p.506. ½ col.

"Richard Morse in this attractive book takes us with him through each month of the year . . . [He] tells us when to watch for the spring bird migrants and when to be on the look-out for the early flowers and butterflies . . . Will be a help to many who love Nature but are in need of a clear and simple guide . . . Illustrated by a number of good photographs . . . There is an interesting series of twelve whole-page line drawings, the art of Miss Doris Meyer . . . Deserves a wide circulation." *Seton Gordon.*

Munshower, Carl Wallace, & **Wardwell,** J. F. Basic college mathematics; a general introduction. 612p. 1942. Holt, New York. $3.20.

School science and mathematics, Nov. 1942, p.807. ⅜ p.

"Covers more ground than many colleges will be able to include in a year course, but topics may be selected without destroying the continuity of the course . . . There is a reasonably adequate number of problems, with answers to odd numbered examples . . . Treatment is in general quite rigorous." *Cecil B. Read.*

Science, Dec. 4, 1942, p.517. ½ col.

"Designed to cover in one year essential selected topics in algebra, trigonometry, analytic geometry and calculus, so as to provide a profitable terminal survey for students taking but one college course in mathematics, and also an introduction for those who prepare for further mathematical work . . . Has been prepared with somewhat more than average care, although the reviewer notes several definitions and formal explanations which seem not above criticism. Answers are provided for odd-numbered problems. Approximately the last hundred pages are devoted to numerical tables, reference formulas and (somewhat incomplete) index." *Albert A. Bennett.*

Murphy, Glenn. Mechanics of fluids. 329p. 1942. International Textbook, Scranton, Pa., $3.25.

Aeronautical engineering review, Oct. 1942, p.77. ⅛ col.

"A modern introductory course in the subject of fluids. The basic method of analysis throughout the text is that of the free body, used in conjunction with the fundamental principles of mechanics, expressed in Newton's law of motion. In many of the developments conventional amplifying assumptions have been introduced to keep the treatment within the mathematical ability of the undergraduate."

National Research Council—Subcommittee on anesthesia. Fundamentals of anesthesia; an outline. 215p. 1942. American Medical Association Press, Chicago, $2.50.

Drug and cosmetic industry, Nov. 1942, p.565. ½ col.

"Primarily intended to serve as a basis for the instruction of medical officers as anesthetists . . . The material has been drawn from a wide range of sources. Much of it was issued in pamphlet form by the American Medical Association at their meetings in Atlantic City (1937), San Francisco (1938) and St. Louis (1939). Further material has been contributed by the members of the Subcommittee on Anesthesia, who have been assisted in this task by their associates, assistants and students. The pages of this book attempt to set forth: (1) the simple principles of physiology, pharmacology, chemistry and physics on which the sound practices of anesthesiology are based, (2) the technical procedures necessary to apply these principles effectively in relieving surgical pain and (3) the application of these principles to the management of patients suffering from injury, illness, operation or the effects of depressant drugs in the hospital or in the field."

Nelson, Alfred J., and others. Calculus. 356p. 1942. Heath, Boston, $2.75.

School science and mathematics, Oct. 1942, p.701. ½ p.

"The material covered is that found in most elementary texts . . . The reviewer has recently analyzed several calculus texts, since a change of text is contemplated. This text rates exceptionally high as to number of illustrative examples, number and type of problems, and clarity of explanations. Possible weaknesses are the lack of any collection of formulas from algebra, geometry, and trigonometry; brief treatment of more difficult integration problems; and the omission of certain minor topics such as the mean value of a function . . . No one interested in a text which introduces integration early in the book can afford to omit examination of this text." *Cecil B. Read.*

North, F. J., and others. Geology in the museum. 112p. 1942. Oxford, New York, $1.50.

Natural history, Dec. 1942, p.273. ¼ col.
"Designed to furnish some details of geological museum technique for the assistance of curators in general and local museums. It is concerned with the preparation, preservation, cataloguing, and, to a lesser extent, the exhibition of geological, mineralogical, and paleontological specimens. A number of 'recipes' and techniques employed in the museum are described and their problems and advantages outlined. It is this content which makes this work of great value to the average collector and student to whom it is sincerely recommended." *H. E. Vokes.*

Norwood, A. G. Private pilot's handbook. 258p. 1942. Pitman, New York, $2.50.
Aero digest, Nov. 1942, p.391. 1 col. including an illustration.
"The student who has taken dual instruction and is ready to take his examination for a private pilot certificate will find in this book a great deal of basic training information that will assist him in attaining his goal . . . A careful perusal of this book should definitely aid any prospective pilot in winning his 'wings'."
Aeronautical engineering review, Nov. 1942, p.198. ¼ col.
"Stripped of nonessential mathematics and technical language, this book is designed to give the pilot and instructor the information that every pilot is required to have before he can be regarded as a competent operator of an airplane under C.A.A. regulations. The elements of flight theory, meteorology, aerial navigation, and the art of radio are outlined. Civil Air Regulations are digested and typical questions on private pilots certificate tests are included . . . Will not serve as a useful textbook but . . . [as] a handbook for reference for pilots who wish to refresh their memories and keep informed of the current regulations."

Payne, Mary Anthony. Biology; season by season. 675p. 1942. American Bk., New York, $2.32.
Nature magazine, Nov. 1942, p.496. ⅓ col.
"A most interesting book and a fine biology text written for use in the Catholic secondary schools . . . It reflects the growth of appreciation of the importance of biology as a basic science for students, the majority of whom may not carry on into college work. Sister Mary Anthony has written a splendidly readable text; supplemented this with carefully worked-out suggestions for activities and self-testing exercises; made an excellent selection of illustrations, and supplied a valuable glossary and good index. She has set a high standard for other Catholic biologies to come."

Pearson, Thomas Gilbert, and others. Birds of North Carolina; manual of identification. Revised edition. 448p. 1942. North Carolina State Museum, Department of Agriculture, Raleigh, N. C., $3.50.
Audubon magazine, Sept.-Oct. 1942, p.314. 2 col.
"Abundantly justifies the high expectations held for it, for it is both readable and informative . . . Much material of the former edition has been used, but there is a wealth of new information and data which students will find invaluable." *Alexander Sprunt, jr.*
Nature magazine, Dec. 1942, p.551. ⅜ col.
"The increased knowledge and interest that have grown up in the past 20 years, in large part as a result of the first issue, have created a demand for a new edition, and this is admirably met by the present volume. The authors have had the help of many collaborators throughout the State and elsewhere. In fact, the names of those who rendered signal aid reads [sic] almost like a list of our more active eastern ornithologists. This feature, of course, adds greatly to the value of the work. The formal list treats 396 species; the appendices include a bibliography of 20 pages, and a condensed account of the times of occurence of the more notable summer visitors, winter visitors, transients, and stragglers, some 175 species being thus treated."

Pesman, M. Walter. Meet the natives. The Author, 3722 S. Humboldt St., Denver, Colo., $1.25.
Natural history, Dec. 1942, p.275. ½ col.
"A most usable and attractive little book for identifying wild flowers, trees, and shrubs of the Central Rocky Mountain Region . . . Over 700 plants are classified,—first, according to life zone where the plant grows; second, according to color; and third, according to season. More than 150 of the more conspicuous or striking plants are illustrated by good, clear pen drawings. Those of similar color and common to the same zone are grouped on the same page. Some 50 other plants are illustrated by excellent photographs . . . Under each life zone, the plants are grouped according to color of flowers, and are described on pages of appropriately colored paper. For example, trees on green paper; red, pink, and reddish-purple herbs on pink paper; white herbs on white paper; blue and bluish-purple herbs on blue paper; yellow herbs on yellow paper. This unique device saves time in looking up a plant." *Clyde Fisher.*

Piersol, George Morris. See **Clinics.**

Piney. A. Synopsis of blood diseases. 120p. 1942. Blakiston, Philadelphia, $2.75.
Journal of the American Medical Association, Nov. 7, 1942, p.800. ¼ col.
"Interesting and is quite a departure from other recent books on hematology. In fifteen chapters concise, minimal descriptions of the symptoms and signs, the blood changes, the pathology and the treatment of the standard diseases of the blood and blood forming organs and certain systemic conditions are given. There are a number of tables and a folding page giving a description of the size, cytologic characteristics and staining reaction of each kind of blood cell. The book may suffer at first by comparison with the larger hematologies, but for its intended purpose, a hematology book for physicians, general practitioners and students in which 'no attempt has been made to go into details that are of interest only to hematologists and clinical pathologists,' it has a definite use. A glossary . . . is given. The list of reference books . . . is rather scanty and is predominantly British. Because of the absence of theoretical and controversial material, this is a handy reference book for rapid consultation."

Polson, J. A. Internal combustion engines. Ed.2, rewritten. Wiley, New York.
Automotive and aviation industries, Nov. 1, 1942, p.58. ¼ col.
"Intended as a textbook for classroom instruction, and the various chapters are followed by a series of problems . . . The entire field of internal combustion engines is covered, both theoretically and practically, including the Diesel engine. Illustrations and descriptions of engines are largely confined to the larger stationary type."

Porges, John. Handbook of heating, ventilating, and air conditioning. 161p. Newnes, London, 17s. 6d.
Journal of the Institute of Fuel, Oct. 1942, p.39. ⅛ col.
"Designed for daily use by engineers and architects . . . It has been arranged in loose-leaf form to enable additions to be made to the text from time to time. The purely descriptive side of the subject has not been dealt with, as it was considered that users of a book of this kind would prefer to have the available space devoted to useful tables and data . . . From the point of view of technical data and scientific facts relating to these subjects, the present book forms a library in miniature."

"Proton." Private generating plant; edited by E. Molloy. 150p. 1942. Chemical Pub., New York, $2.50.
Power, Dec. 1942, p.138. ¼ col.

"According to the preface . . . the subject matter deals with cases for which the British Grid scheme is inadequate such as factories where steam is required for process, geographically remote locations that favor diesel [sic] installations, standby plants and emergency lighting installations. The book itself is mainly devoted to the discussion of internal-combustion-engine plants and windpower units ranging down from 50 kw with their associated batteries, electrical circuits and maintenance requirements."

Read, John. Explosives. 160p. 1942. Penguin, New York, unbound. (Pelican books.)

Journal of chemical education, Nov. 1942. p.553. 1⅓ col.

"This [book is] on sale throughout England at the moderate price . . . of six pence . . . [It] is authoritative in substance and wholly understandable, pleasing in style, easy and entertaining to read. It is written in a popular manner, journalistically, to convey a sympathetic understanding of the subject of explosives to a reader who has had no previous acquaintance with chemistry . . . In a small and popular book of this sort it is perhaps remarkable that so many of the most recent developments in the explosives art should be mentioned at all. The author does not discuss nitroguanidine, but does touch upon flash reducers, cooling agents, and moderants or deadeners for smokeless powder, on hexamethylenetriperoxidediamine (HMTD), on trinitrotriazidobenzene, on tetracene, and on 'Cyclonite, also known as Hexogen or T4.' This book will help to make many persons understand more clearly these essentially benevolent substances which have lately been elected to fulfil for a time the roles [sic] of assassin and murderer." *Tenney L. Davis.*

Reese, Albert M. Outlines of economic zoology. Ed.4. Blakiston, Philadelphia, $3.25.

Natural history, Dec. 1942, p.272. ⅔ col.

"A systematic review in outline of the entire animal kingdom, from the microscopic single-celled animals of various human diseases, to the giant whale which may yield '30 tons or more' of oil. Animal by animal, group by group, there is statement of the obvious values or harmfulness of each to mankind, with methods of its utilization or control. It is a great convenience to have tangible data on so broad a subject accessible in one small volume, and familiarity with its pages will be an excellent introduction to economic zoology . . . A very interesting book, and one equally useful for reference, as is attested by this being its fourth edition. An excellent index makes the large amount and variety of factual material accessible, and there is also an extensive bibliography. It is attractively and durably made, as such a book should be." *J. T. N.*

Rice, Thurman B., & **Coy,** Fern. Microbiology and pathology. 397p. 1942. Macmillan, New York, $3.

American journal of nursing, Nov. 1942, p.1349. 1 col.

"This first edition of convenient size and good readable print combines two subjects in one volume. The first ten chapters are concerned with pathology, and these follow the outline usually suggested. They probably would be of immense value in supplementing the doctors' lectures in this subject. The remaining chapters, eleven to thirty-five, consider microbiology. They actually consist of a simply stated synopsis of Dr. Rice's *Textbook of Bacteriology* (1938), written for medical students and, incidently, nurses." *Olive A. Ricketts.*

Rice, Thurman B. Textbook of bacteriology. Ed.3, revised. 560p. 1942. Saunders, Philadelphia, $5.

American journal of nursing, Nov. 1942, p.1346. ¾ col.

"Contains the basic fundamentals and the necessary essentials in a condensed form to serve as ready source material for use in an introductory course in bacteriology or for use by those who may not find time to consult references of a more detailed and technical nature . . . Should serve as a useful reference in the nursing school library." *Esther A. Hilton.*

Richards, Phil, & **Banigan,** J. J. How to abandon ship. 152p. $1.

Scientific American, Nov. 1942, p.235. 12 l.

"Had this book been studied by every man who has gone to sea since the Axis submarines began to sink shipping, there would have been fewer lives lost. First author, a survivor of the *Robin Moor,* brought his crew through 19 days of tropical storms and other hardships without mishap, knows his ships and his seas. A manual concerned solely with human lives, with the single purpose of getting safely off a sinking ship to eventual safety." *A. D. R., IV.*

Rider, Paul R. Plane and spherical trigonometry. 273p. 1942. Macmillan, New York, $2.

School science and mathematics, Oct. 1942, p.702. ⅓ p.

"In considering a text in trigonometry, one is interested in the order of treatment of topics. In this text, the acute angle is taken up before the general angle; applications, including the solution of oblique triangles, precede the work on trigonometric formulas and identities, radian measure, and graphic representation. There is more material than would be needed for a minimum course, and the supply of problems is large enough to allow assigning different problems in successive years. There is a brief unit on the mil as a unit of angular measurement."

Science studies (St. Bonaventure College), Nov. 1942, p.24. ⅓ col.

"A usuable and timely text. The fine arrangement of chapters is such that any desired order change is facilitated for the teacher. The text is not too difficult for high school use; yet it contains enough material to make it useful for the beginning college student . . . Drawings . . . are simple and clear . . . A worthy addition to the ever-growing list of trigonometry texts . . . Recommended for consideration in basic defense courses, and should be found not only practical, but also basic." *R. E. R.*

Ripper, William. Heat engines. American edition revised by A. T. J. Kersey. 337p. 1942. Longmans, New York, $1.60.

Power, Nov. 1942, p.188. 12 l.

"American edition of a British book that starts at the beginning of heat and power without formulas or mathematical discussion of theory. Discusses heat transfer, effects of heating and cooling, the formation of steam, reciprocating steam engines with their valves and governors, compound engines, boilers, fuels and combustion, furnaces, steam turbines and internal combustion engines . . . Can be read and understood by any adult."

Robeson, Frank L. Physics. 819p. 1942. Macmillan, New York, $4.50.

School science and mathematics, Nov. 1942, p.808. ½ p.

"Will meet the requirements of many physics teachers. The type is large, diagrams clear and well made, and the important ideas stand out clearly by use of bold faced type . . . At the close of each chapter is a short list of essential problems . . . No answers are given . . .Liberal arts students . . . will find sections of this book very difficult and they will have to omit the chapter on Electromagnetism and some other sections . . . This is an excellent text for engineering students and those specializing in physics, but for others assignments and use must be carefully planned." *G. W. W.*

Rogers, William W., & **Welton,** P. L. Blueprint reading at work. 136p. 1942. Silver, New York, $1.28.

Aeronautical engineering review, Nov. 1942, p.198. ½ col.

"Consists of a series of related steps designed to give students an understanding of shop blueprints without necessarily teaching them to make mechanical drawings. The mechanical drawings which are used deal with those parts most frequently encountered in industry. Problems are changed from job to job to enable the student to apply the information taught with each job . . . Questions are given."

Sasso, John. Plastics for industrial use. 229p. 1942. McGraw, New York, $2.50.

Machinery (New York) Dec. 1942, p.240. ⅛ col.

"Emphasis is laid on comparative properties, methods of selecting for specific uses, and proper design. The first chapters give the basic information needed before any plastic can be adapted to engineering use. These are followed by separate chapters, each devoted to a specific plastic."

Paper trade journal, Nov. 26, 1942, p.101. ¼ col.

"Among the subjects covered are basic compounding materials; principles of design, faults; causes and remedies in molded parts; phenol; urea; vinyl; acrylic plastics; polystyrene; vinylidene chloride; cellulose acetate; ethyl cellulose; plywood and adhesive and laminated plastics. No mention appears to be made of lignin plastics although this is an interesting development. However, there is much in the text that will be of value to workers in the field of any type of plastic materials."

Power, Dec. 1942, p.162, 164. ¼ col.

"Plastics can do duty as substitutes for strategic metals, but they also possess certain inherent characteristics and advantages of their own. This book lists properties of modern plastics that aid in selecting the right material for strength and performance. While the emphasis, of course, has been placed on casting and molding methods as applied to production of plastic parts, such interesting and informative data has [sic] been collected on present-day application to such items as cams, electric insulation and even stirrup pumps. Data on cutting tools and machining are given."

Product engineering, Dec. 1942, p.744. ½ col.

"A timely and valuable handbook for all engineers and designers who are concerned with the selection and specification of plastic materials for industrial applications. All the information . . . is highly practical, further it is presented in an orderly ready-to-use form. Many typical examples of plastic parts are shown in the 96 illustrations. Important characteristics and properties of the various materials are summarized in 44 tables of useful pertinent data . . . A worthwhile addition to any industrial engineer's collection of reference and source books dealing with the subject of plastics."

Textile world, Dec. 1942. p.106. ⅖ col.

"This book is one of the few down-to-earth books on plastics for the engineer, especially the development engineer, who must investigate the field of plastics for industrial applications. Long and involved chemical formulas and calculations have been omitted wherever they are not related directly to strength and physical properties of plastics. Emphasis has been placed on the comparative properties, methods of selecting plastics for specific uses and on the proper design of the product, especially with regard to production costs and its ability to be formed easily into a molded product . . . A directory of trade names has been included which lists the suppliers and the molders of plastic products."

Schiff, Fritz, & **Boyd,** W. C. Blood grouping technic. 248p. 1942. Interscience Publishers, New York, $5.

American anthropologist, Oct.-Dec. 1942, p.713. 1⅛ col.

"Those who wish to learn how blood groups are determined or how to make blood group determinations for themselves will find all the necessary information clearly and authoritatively set out here. In the anthropological section . . . Dr. Boyd discusses the contribution which blood grouping is capable of making to the problem of human evolution and diversification. This section is of such value that it should be read by all anthropologists without distinction as to whether they be of the physical or cultural ilk . . . Gives an account of the available data and several concrete illustrations of the manner in which the analysis of the distribution of blood group gene frequencies may assist in the solution of anthropological problems . . . The technics involved in making such determinations and analyses are given in detail by Dr. Boyd, and it is quite certain that the methods he recommends will become the standard ones in all future anthropological investigations of this kind." *M. F. Ashley Montagu.*

Schulz, Ellen D. Cactus culture. Revised edition. 180p. 1942. Judd, New York, $2.

Journal of the New York Botanical Garden, Nov. 1942, p.279. ⅖ col.

"One must heartily commend Ellen D. Schulz for such a readable and understanding work upon the culture of cacti and other succulents . . . Far better than the usual 'how I did it' type of book or musty tomes upon botanical relationships and structures, here is a book on culture starting at rock bottom and working up to the topmost graft. The only flaw this reviewer can find is the briefness of the material upon indoor culture . . . This book was first printed in 1932, but the addition of several photographs and sketches and a new chapter on feeding are the only revisions that come to light." *E. J. Alexander.*

Sears, W. Gordon. Anatomy and physiology for nurses. 376p. 1942. Williams & Wilkins Co., Baltimore, $2.50.

American journal of nursing, Nov. 1942, p.1342. ⅗ col.

"Written . . . to meet the requirements of the General Nursing Council for England and Wales. It is much richer in descriptive anatomy than physiology, presenting the material in a very clear style, but limited in its scope . . . Offers some excellent material as a source of reference but is not recommended as a text for approved schools of nursing in this country." *Dorothy E. Dawes.*

Sewall, Mary. Manual of pharmacology. 220p. 1942. Saunders, Philadelphia, $2.

American journal of nursing, Nov. 1942. p.1344. ¾ col.

"Intended to serve as a framework from which assignments can be made. The author suggests—and indeed it would be extremely necessary—that this manual be supplemented by text and reference books. However, the book does not include lists of suggested references for students or teachers." *Amy Frances Brown.*

Sidgwick, J. B. Astronomy for night watchers. Faber, London. 5s. net.

Popular astronomy, Nov. 1942, p.521. ½ p.

"The title quite clearly indicates the character and purpose of the book. It is further described by the publisher . . . 'The author describes the changing appearances of the night sky and gives a summary of modern knowledge regarding the planets, moon, stars, comets and meteors, star clusters, and nebulae. A special section tells you how to find your way at night by means of the stars. The second half . . . is devoted to descriptions of the individual constellations: how to find them, and the many objects of special interest for observers with binoculars. These are illustrated by forty-seven star maps. In addition, there is a lunar map and four seasonal maps showing the constellations of winter, spring, summer, and autumn'."

Slater, J. C. Microwave transmission. 309p. 1942. McGraw, New York, $3.50.

Journal of the Franklin Institute, Nov. 1942, p.515. ⅔ p.

"This book, the first of its kind, is devoted to transmission almost exclusively, and merely re-

fers briefly to power sources and receivers. It begins with the theory of transmission, which is developed without reference to any particular type of line and using ideas of electric circuits alone. From this theory, the student is lead to the use of Maxwell's equations and the natural extension of the study of plane waves. Then, the thread moves on to rectangular wave guides, and the more complicated types of transmission lines, the most important of which is the coaxial cable . . . In contrast with what has been treated up to this point—disturbances propagated along one definite direction—the next chapter deals with an antenna in free space which sends out radiation in all directions. Here the spherical waves are first investigated, then one of the particular advantages of microwaves, the ability to direct the waves in a rather sharp beam . . . The way in which the author approaches the subject and his 'carry-through' are commendable and reflect careful decisions. The work combines that which has appeared in several periodicals at various times with other knowledge, so that in this compact form it is of interest to the student . . . the physicist and engineer." *R. H. Oppermann.*

Radio news, Dec. 1942, p.38. ½ col.

"The author steers a middle course between very elementary and very advanced stands; between the highly theoretical and the completely practical. Microwaves are treated both from the standpoint of conventional transmission lines and of Maxwell's equations. It is the first book of its kind on ultra-high-frequency systems . . . Students and engineers will benefit by adding this important book to their libraries."

Steeds, W. Engineering materials, machine tools and processes. 345p. 1942. Pitman, London, 16s. net.

Mechanical world, Oct. 23, 1942, p.400. ⅝ col.

"The first eight chapters deal with material and certain processes. The first is on testing and inspection and is followed by others on iron steel, copper, brasses and other non-ferrous materials. There is then a chapter on the production of castings, another on forging, and two more on welding and plastic moulding. A further distinct division of the broad subject is then opened by a chapter on the classification of machine tools, following which the different kinds of machine processes are dealt with separately. Finally there is a chapter on measuring methods and gauging. Naturally in a book of this kind the items dealt with are mostly machines and equipment. These are illustrated throughout the work by photographs of many well-known makes. There are . . . numerous line diagrams."

Stevenson, Jessie L. Posture and nursing. 63p. 1942. Joint Orthopedic Nursing Advisory Service, 1790 Broadway, New York, gratis unbound.

American journal of nursing, Nov. 1942, p.1342. ⅝ col.

"A splendid handbook useful to nurses in many fields who are interested in knowing more about posture and in improving their own posture and that of co-workers and patients . . . Fills a long-felt need and should be welcomed by many nurses. It is an excellent example of the forward-looking work of the Joint Orthopedic Nursing Advisory Service." *A. M. T.*

Hygeia, Nov. 1942, p.872. ⅔ col.

"A good reference text to be used in schools of nursing, in postgraduate programs of study for nurses and in staff education programs for nurses and public health agencies. It contains a great deal of valuable information for nurses in all fields where posture and body mechanics enter into their work . . . Reflects the general concept of the Joint Council on Orthopedic Nursing." *Philip Lewin.*

Strahlem, Richard E. Accounting fundamentals. 365p. 1942. Ronald, New York, $3.50.

N. A. C. A. bulletin, Dec. 1, 1942, *section 2,* p.407. ⅓ p.

"The sub-title of this volume designates it as a textbook for industrial and engineering courses. However, its intensive treatment of accounting fundamentals might also be adapted to the short courses currently being offered as part of the adult training programs of industry . . . Of particular interest are chapters 12 through 15 which contain an elementary survey of cost accounting and problems, with particular attention to specific order costs . . . There are . . . supplementary problems and a practice set."

Tanner, James T. The ivory-billed woodpecker. National Audubon Society, New York, $2.50.

Audubon magazine, Nov.-Dec. 1942, p.381. 1¼ col.

"What a sterling contribution this is! It would seem to be the very model of what such a study should be. Detailed though it is in reality, the details are so well marshalled, correlated, and proportioned that one has almost no consciousness of them; the monograph appears to be a summary, in style and presentation, instead of the nearly definitive work that it is. That is what I would call thoroughly good organization and admirable scientific exposition . . . Dr. Tanner was selected by Dr. Allen of Cornell to go south, on an Audubon Research Fellowship, to make a scientific study of the ivory-bill in an attempt to save this bird. The present work is the result of several years of Tanner's labors . . . Where is the ivory-bill found today? What can be done to save him? I'm going to let you find out for yourself. If you really want to know, you'll be enough of an ornithologist to get this book and read it, and own it for a place on your shelf." *D. C. P.*

Natural history, Dec. 1942, p.272. ⅜ col.

"Details of appearance, behavior, food, distribution, population density, past and present ranges, and similar facts are each discussed in some detail, and the brochure is illustrated with a colored frontispiece, photographs, and line drawings. It is highly recommended to everyone interested in conservation and especially in the preservation of this largest and finest of the North American woodpeckers." *John T. Zimmer.*

Teale, Edwin Way. Near horizons. 319p. 1942. Dodd, New York, $3.75.

Nature magazine, Dec. 1942, p.551. ⅓ col.

"The story of an insect garden on a Long Island hillside . . . In this garden Mr. Teale has studied and photographed the wide and fascinating variety of insects that dwell there. More than 160 of his splendid pictures illustrate the book. The text is popular and delightful reading, and the publishers have collaborated in the production of an outstanding book that should enjoy even greater popularity than the earlier insect books by Mr. Teale that were so well received."

Thomas, W. Stephen. The amateur scientist. 291p. 1942. Norton, New York, $3.

Chemical and engineering news, Nov. 25, 1942, p.1541. ⅝ col.

"Primarily a survey of amateur science and an attempt to evaluate its social significance . . . But the discussion of amateur scientists, their projects, their methods, and their organizations goes further than one would expect of a mere sociological survey. The accounts of the activities of individuals and groups suggest avenues by which others similarly inclined may share in the enjoyment of scientific pursuits. Indeed, the projects described and the methods employed in them proved fascinating to this reviewer. Naturally the subjects discussed fall largely into the category of nature study as being the most easily accessible field for the amateur."

Natural history, Oct. 1942, p.164. ⅝ col.

"This book, which is in part a report of the

study of amateur scientists in the Philadelphia area conducted by the Committee on Education and Participation in Science, of the American Philosophical Society, shows conclusively that the efforts of amateur scientists can be increased in value if those efforts are directed and coordinated . . . Readers . . . should be impressed by the fact that the Philadelphia experiment, in which 500 amateur scientists took part, was not only a success, but showed that amateurs were more than willing to devote their time and effort to a good cause without any consideration of compensation other than that afforded by the feeling of participating in a scientific endeavor. As long as the amateur American scientists are more interested in their work than they are in receiving compensation for that work, the future of American science seems fully assured." *John Saunders.*

Nature magazine, Dec. 1942, p.509. ¾ col.

"Discusses the amateur scientist, his place in the community, his organizations, his results and his importance for the future . . . A comprehensive picture of the amateur in the scientific picture; and enlightening and inspiring compilation of facts and suggestions."

Tiffin, Joseph. Industrial psychology. 386p. 1942. Prentice-Hall, New York, $4.65.

National safety news, Dec. 1942, p.62. 1½ col.

"Much of the material is based on previously unpublished data and research, developed out of special investigations in the industrial field. The volume combines academic considerations with practical industrial application, for the purpose of enabling management properly to select, place, train and supervise both old and new employees, so as to attain maximum production . . . While many of the items covered are familiar to the practical plant man, there are enough new ideas presented to make this book useful to the veteran as well as a student of psychology or industrial relations." *A. M. Baltzer.*

Towner, H. J., & **Boys,** Howard. Scale model aircraft that fly. 96p. 1942. Harborough, Leicester, England, 3s. 6d.

Aeronautical engineering review, Nov. 1942, p.199. 10 l.

"Information is presented on how to build scale model airplanes that will fly. Illustrations and many drawings of both the planes and operating mechanism are furnished. The reader is given an outline of aerodynamics. Gear boxes, directional control, wing fixing, landing gears, and airscrews are discussed. Other sections cover finishing, flying, and photographic models."

United States Naval Academy. Physics of aviation; an elementary text on the theory of flight. 124p. 1942. The Academy, Department of Electrical Engineering, Annapolis, Md., $1.15.

Aeronautical engineering review, Nov. 1942, p.199. ⅛ col.

"Clear, concise and thorough . . . Supplements the regular physics textbook by giving emphasis to the theory of flight, as the author believes that elementary aerodynamics is a part of applied physics and not a separate subject. For a student who wants to study the fundamentals of aerodynamics, this book will provide the essential requirements."

von Engeln, O. D. Geomorphology; systematic and regional. 655p. 1942. Macmillan, New York, $4.50.

Economic geology, Nov. 1942, p.642. 2 p.

"Publication within the last five years of at least six books in English on physiography and geomorphology might lead one to suppose that this field is adequately supplied with modern texts. Professor von Engeln's volume successfully demonstrates the fallacy of that supposition. This work is immediately removed from the commonplace by its content, organization, and illustrations . . . Not the least among the attractive features . . . are the abundant illustrations . . . Works to which reference is made are assembled in a composite list at the back adjoining the index. This is supplemented by selected references at the end of each chapter, effectively subdivided into classical and recent groups . . . It is difficult to escape the impression that this book will appeal more to the experimental geologist and advanced student than to those whose knowledge is elementary. There is no question but that it is a notable contribution destined to take its place among American books of recognized distinction. No well-informed geologist or geographer can neglect reading at least parts of this volume if he wishes to keep abreast of modern developments in geomorphology." *Robert P. Sharp.*

Waitt, Alden H. Gas warfare. 327p. 1942. Duell, New York, $2.75.

Chemical warfare bulletin, Oct. 1942, p.210. 1 p.

"A most extraordinary volume. It is of a highly technical nature, yet written with all the simplicity of McGuffey's first reader . . . In general, it deserves respect as a brilliantly organized estimate of the nature of gas warfare—an authoritative, hard-hitting treatise which will make the ordinary lay reader shudder, and delight the heart of the military scientist. This whole complex subject is carefully covered. The chemical weapons themselves, and their use in battle, as well as the methods of protection against them are completely entered into. The book is sufficiently technical to serve as a handbook for officers in the field, but . . . can be read with interest and profit by anyone." *William B. Ziff.*

Flying, Dec. 1942, p.124. ⅜ col.

"Of particular interest to the layman is the author's comprehensive description not only of all types of chemicals used in war but a meticulously outlined measure of protection against each of them . . . Colonel Waitt has done a valuable service in making available to the general public his complete and easily read book, in which his long experience as a member of the Chemical Warfare Service enables him to write with such complete knowledge and authority. For the military reader . . . [it] will prove an invaluable instructive manual, as the author stresses the tactics of chemical warfare, showing why gas can be used in one situation and not in another. Technicians will be deeply interested in Colonel Waitt's explanation of how chemical warfare is not merely a question of expending gas shells or bombs or spray, but a complicated matter involving winds, temperature, humidity, terrain growth and the intent of the attack."

Military engineer, Dec. 1942, p.650. ½ col.

"The use of gas as a weapon and the methods of protection from it are subjects which have occupied the thoughts of nearly everyone to some degree in recent months. Of the many books written treating these subjects, there is none more thorough and more readable for the layman than this one. Colonel Waitt, an officer in the Chemical Warfare Service and an authority on chemical agents of war, has written this book as a handbook for civilian and soldier, for air raid warden and gas officer . . . A very complete and authoritative book. Many illustrations. Appendix and Index. Also chart of Chemical Warfare Agents."

Warring, R. H. Model gliders. 97p. Harborough, Leicester, England, 4s.

Mechanics, Oct. 16, 1942, p.14. ¼ col.

"Will no doubt be welcomed by aero modellists. The book . . . is ably written by an authority on model aircraft and the numerous illustrations enhance both the attractiveness and general utility . . . Has chapters on elementary meteorology, selection of models, aerodynamics, glider design, outdoor, indoor and two-line gliders, advanced designs for competition, performance, stability, etc. It also gives some data on aircraft wing sections and the F.A.I. glider rules."

Welton, Paul, & Rogers, W. W. Shop mathematics at work. 204p. 1942. Silver, New York, $1.56.

Aeronautical engineering review, Nov. 1942, p.198. ⅓ col.

"Presents the mathematics most commonly included in courses in shop mathematics . . . Designed to function as a single source of instruction to replace the reference book plus work sheet type of instructional material. The problems . . . represent real shop situations in a variety of trades, and the terminology of the shop is used throughout . . . Sections of the book cover common and decimal fractions, measurement, using letters and numbers, equations, exponents and square roots, formulas, ratio and proportion, geometric constructions, and right triangle trigonometry."

Who's who in aviation. 486p. 1942. Ziff-Davis Pub. Co., Chicago, $5.

Aeronautical engineering review, Nov. 1942, p.201. ¼ col.

"Over 4,000 names are listed with short sketches. Emphasis is given to the aeronautical activities of each person. The data were compiled by The Writers' Program of the W.P.A., cosponsored by the Illinois Aeronautics Commission and the Chicago Aero Commission . . . Will be particularly useful as a standard reference and should be within arm's reach of anyone engaged in the aeronautical field."

Williams, Kenneth P. The calculation of orbits of asteroids and comets. 214p. $3.35.

Scientific American, Dec. 1942, p.294. ⅛ col.

"For the beginner—in orbit calculation. Written by the professor of mathematics at Indiana University for student professional astronomers. Advanced amateur mathematicians having a well-lubricated facility with trigonometry, an elementary comprehension of the formal astronomy of position, a world of patience and tenacity, and a ball-bearing brain, may also hope to learn this work. Other amateurs, curious to see just what this much-talked-of (in whispers) bogey looks like, may get a close-up through this book." *A. G. I.*

Woods, Baldwin M., & **De Garmo,** E. P. Introduction to engineering economy. 441p. Macmillan, New York, $4.

Engineering news-record, Dec. 3, 1942, p.96. ⅓ col.

"While written as a textbook for use in engineering schools, this book should prove useful to engineers wishing to broaden their understanding of engineering economy because it is designed to provide the students with knowledge of fundamental principles. Discussed are such matters as financing engineering enterprises; valuation and depreciation; the relationship of accounting to economic studies; capacity, load and future demand factors; the use of graphical methods of analysis; and statistical methods in engineering quality control. A chapter of special interest to older engineers is the one entitled 'Economy Studies of Governmental Projects'."

Wright, Allen, & **Wright,** A. H. Handbook of frogs and toads. Revised edition. Comstock Pub. Co., Ithaca, N. Y., $3.

Natural history, Dec. 1942, p.272. ½ col.

"Contains descriptions, life history notes, photographs, and keys that will enable the amateur naturalist to identify and acquire familiarity with the frogs and toads of the United States. It is all that a handbook should be—indeed, much more. The beginning student will find it interesting and stimulating, and the professional herpetologist will turn to its pages frequently for a summary of present knowledge of these amphibians. The book is the outcome of a lifetime of study and photography . . . A number of herpetologists will not completely agree on the systematic arrangement of some forms, but this volume is sure to take its place above its predecessor as the outstanding book on the frogs and toads of the United States." *J. A. Oliver.*

Young, A. P., & **Griffiths,** L. Automobile electrical equipment. Ed.2. 351p. 1942. Iliffe, London, 15s.

Automobile engineer, Oct. 1942, p.392. ⅜ col.

"Excellent . . . The complete electrical equipment used with internal combustion engines is treated in a very able manner."

Electrical review, Oct. 16, 1942, p.488. 11 l.

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Young, G. B. Magnetic crack-detection. C. Griffin, London, 2s. 6d. net.

Foundry trade journal, Oct. 15, 1942, p.140. ¼ col.

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